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10/28/98

SITE ASSESSMENT REPORT
FOR
DANLEY MACHINES SITE
CICERO, COOK COUNTY, ILLINOIS
TDD: S05-9807-013
PAN: 8U1301SIXX

October 28, 1998

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency and Enforcement Response Branch
77 West Jackson Boulevard
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Table of Contents

List of Figures

List of Tables

1. Introduction

The Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) was tasked by the Emergency Response Branch (ERB) of the United States Environmental Protection Agency (U.S. EPA) to conduct a site assessment at the Danley Machines (DM) site in Cicero, Cook County, Illinois, under Technical Direction Document (TDD) S05-9807-013. START was tasked to prepare and implement a health and safety plan; compile and review background information; subcontract analytical services; document conditions at the site; conduct air monitoring and multi-media sampling; evaluate threats to human health and the environment; and make recommendations and provide options to U.S. EPA as to the potential need for a removal action, further investigation, referral to other government agencies or U.S. EPA programs, or other actions which may be prudent. The site assessment was performed in accordance with the National Contingency Plan (NCP) in the Code of Federal Regulations (CFR) Section 300.415 to evaluate on-site conditions and possible threats to human health, welfare, and the environment. The site assessment was conducted on July 14, 1998, with an additional sampling event conducted on August 11, 1998, under the authority of U.S. EPA On-Scene Coordinator (OSC) Charlie Gebien. This report summarizes START site assessment activities.

2. Site Background

2.1 Site Description

The DM site is an approximately 5-acre area that includes a dismantled power plant, warehouse, water tower, and paved lot at 2100 S. 54th Avenue in Cicero, Cook County, Illinois (Figure 2-1). The site's geographic coordinates are 41°51'03.4" N latitude and 87°45'34.1" W longitude. The site was formerly owned by Danley Machines, a manufacturer of machine parts. The site includes an abandoned power plant that had powered the entire Danley Machines industrial area. All that remains of the power plant are the building with the remainder of the plumbing that supplied fuel to the generators, some dry-type transformers, and underground storage tanks (USTs) that are believed to contain fuel oil.

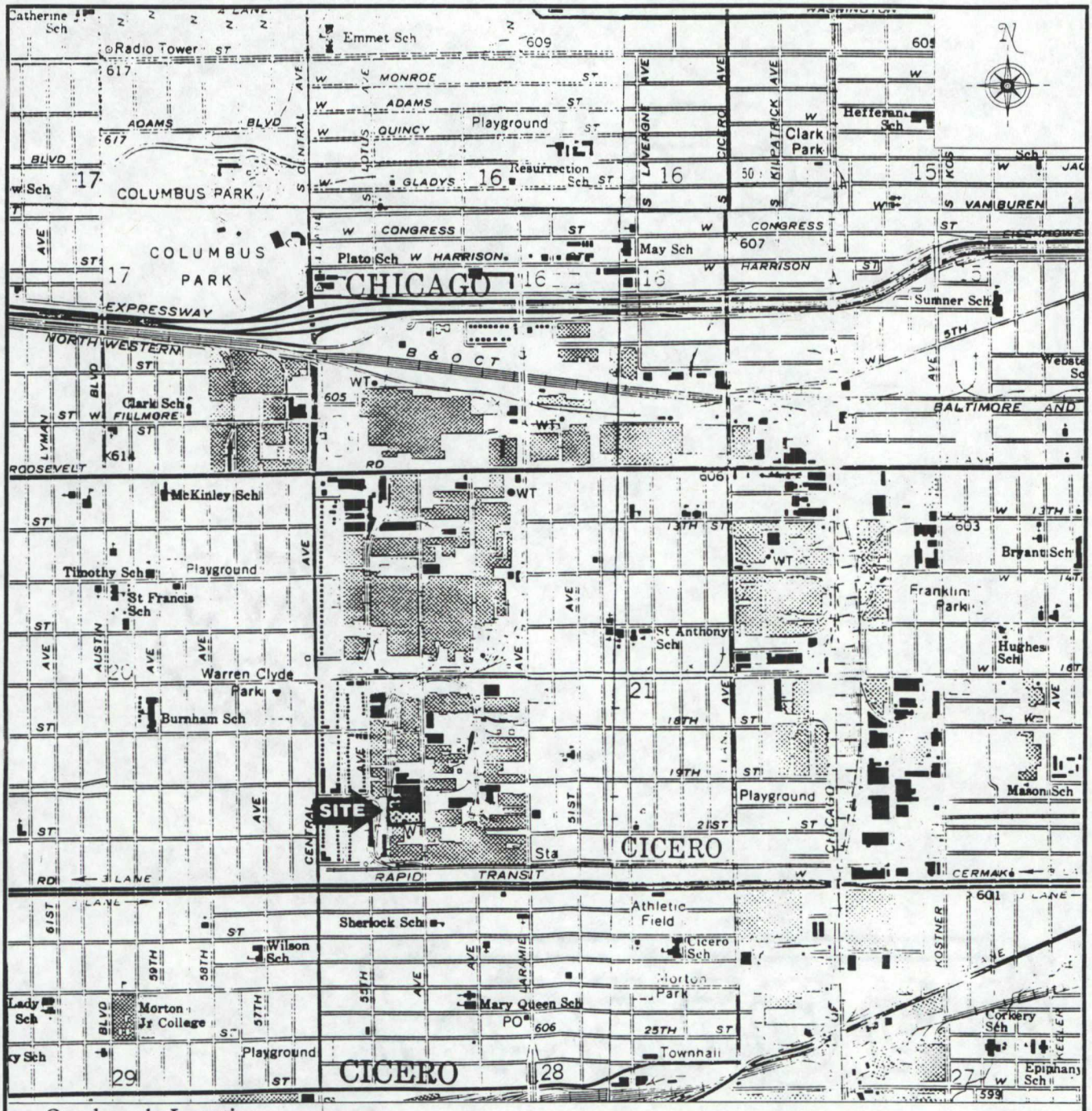
A large warehouse is located at the north end of the site. The warehouse is not currently used, but the City of Cicero Fire Department (CFD) noted that the warehouse had been used recently by an unlicenced business. Packing material, old tires, and other miscellaneous office furniture are visible through the windows of the warehouse building. A total of 22 drums are located in a room on the western side of the warehouse (Figure 2-2).

A large free standing water tower is located on the open lot east of the power plant building. A total of 29 drums are located on the exterior of the power plant building, immediately outside a door located at the northeast corner of the building (Figure 2-2). Some of the drums are labeled "Trichloroethylene" and "DTE oil". A total of 51 drums are located on the DM site property. A paved area near the northwest corner of the power plant building includes a sewer catch basin and two grated sumps that are access points for the USTs. The ground surrounding the sewer catch basin and sumps is flooded with spilled petroleum-based product. The power plant building contains numerous sumps. The sump located in the northwest corner of the building is half full of the petroleum-based product.

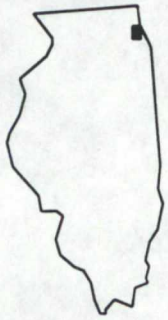
2.2 Site History

On July 14, 1998, the Illinois Environmental Protection Agency (IEPA) responded to a call from CFD regarding a report of an oil spill at the DM site. Jim Clark, with IEPA, met with CFD Fire Chief Jerry Chlada at the DM site. IEPA reported that there are at least 20 drums on the site, five of which were believed to be full. IEPA entered the power plant building and noted three to four Allis-Chalmer dry-type transformers located near the southeast corner, on the second floor of the building. The ground near the northwest corner of the power plant building was flooded with a petroleum-based product. The petroleum-based product was possibly from the USTs located near this area. IEPA and CFD attempted to contact the property owner about the incident, but were unsuccessful in reaching the owner.

On July 17, 1998, U.S. EPA OSCs William Simes and Charlie Gebien and U.S. EPA Civil Investigator Joe Kawecki met with IEPA representatives Clark and Edward Osowski at the DM site. CFD Fire Chief Jerry Chlada arrived at the site a short while later. U.S. EPA and IEPA performed a site reconnaisance. Concerns were raised about the possibility of polychlorinated biphenyls (PCBs) in the transformers and/or the petroleum-based product found on the site. IEPA requested that the incident be referred to U.S. EPA. IEPA informed the Office of the State Fire Marshall (OSFM) and the Municipal Water Reclamation District (MWRD) of the possible release of oil off site via the sewers.



Quadrangle Location



Illinois

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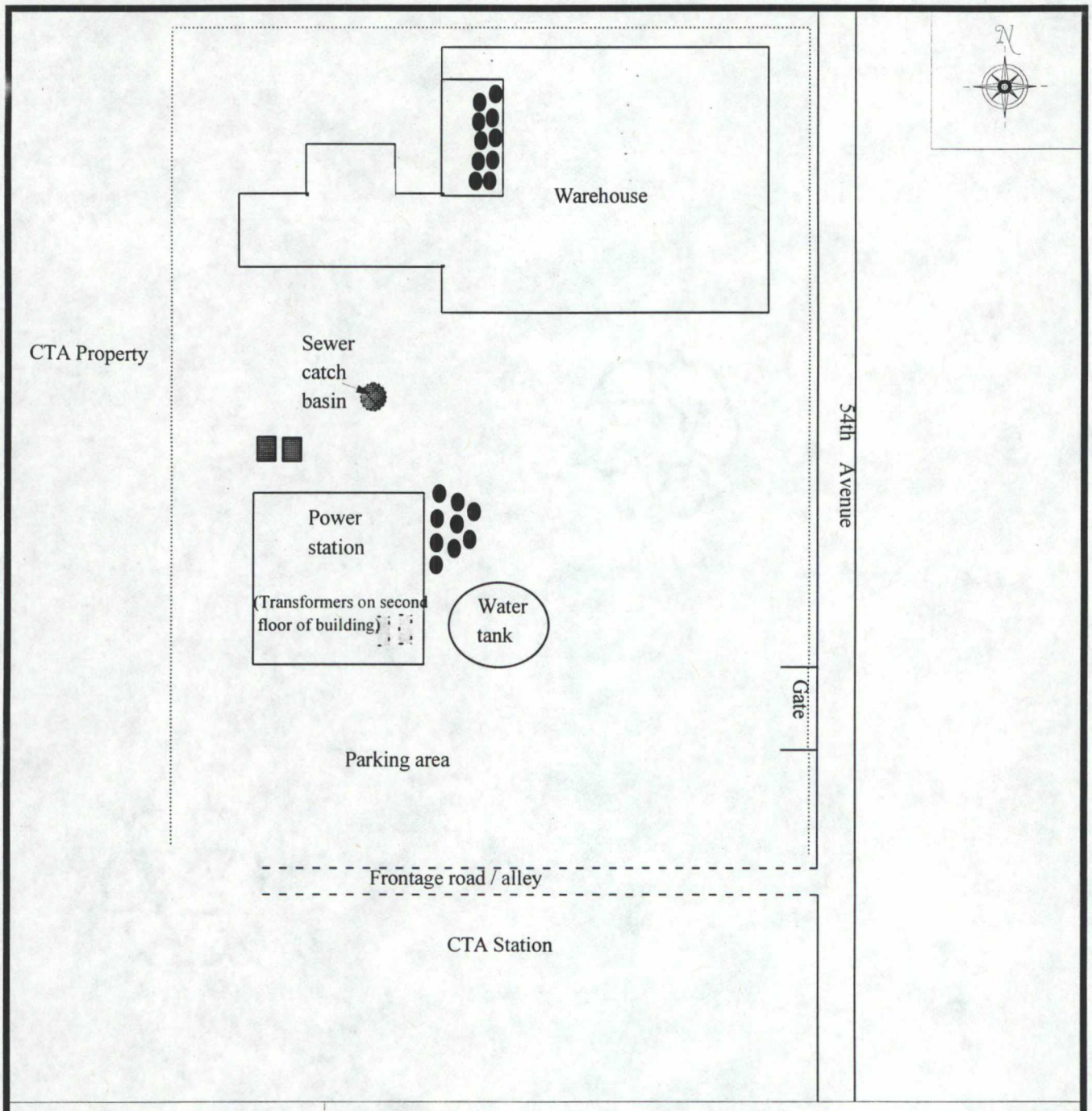
TITLE: Site Location Map	FIGURE #: 2-1
SITE: Danley Machines Site	SCALE: Not to scale
CITY: Cicero STATE: Illinois	TDD: S05-9807-013
SOURCE: U.S.G.S. 7.5 Minute Topographic Series Berwyn, IL Quadrangle	DATE: 1963 REVISED: 1972, 1980



Legend

Fence

Transformer

Drum

UST access doors

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TITLE: Site Features Map		FIGURE #: 2-2
SITE: Danley Machines Site		SCALE: Not to scale
CITY: Cicero	STATE: Illinois	TDD: S05-9807-013
SOURCE: Ecology and Environment, Inc.		DATE: 7-23-98

3. Site Assessment

On July 22, 1998, U.S. EPA held a meeting to discuss site access for the DM site. The site had been referred to U.S. EPA by IEPA after an initial emergency response concerning the report of oil possibly discharging into the City of Cicero's sewer system. Site ownership was uncertain and four possible owners were being investigated for the site; Luis Wolf; Andres Schcolnik; PLC management, owned by Mel Fields; and the Connel partnership, the present owners of Danley Machines.

On July 24, 1998, U.S. EPA OSC Charlie Gebien, CFD Fire Chief Jerry Chlada, MWRD representatives Greg Yarnik and Mike McCune, and START members Joseph Klemp and Lisa Graczyk met at the DM site. The MWRD representatives were on site to photodocument the spill for training purposes. CFD used a tractor to move a cement road barrier which opened access to the site for U.S. EPA and START. U.S. EPA and START performed a site reconnaissance. START counted 29 drums, eight of which appeared to be full, located near the northeast corner of the power station building. Labels that were visible on the drums included markings of "Trichloroethylene" and "DTE oil". A shipping label on one of the drums identified the shipper as R.T. Vanderbilt Company, Inc., of Norwalk, Connecticut, and the recipient as Wilbow Inc., of Cicero, Illinois. The shipping label identified the contents of the drum to have been "Ledate Amyl".

U.S. EPA and START entered the power plant building and documented conditions within the building. A sump area near the northwest corner of the building was half full of a petroleum-based product. The doors and windows of the building were broken and the building was accessible. A series of dry-type transformers were located on a second floor landing in the southeast corner of the building. Past and possibly present use of the building by vagrants was also noted.

After the initial reconnaissance, START members Graczyk and Klemp donned level B PPE to sample the contents of the drums. Initial headspace readings were collected from each drum with a photoionization detector (PID). Headspace in the drums that contained materials ranged from 0 to 300 parts per million (ppm). The drums with the highest headspace readings were selected for sample

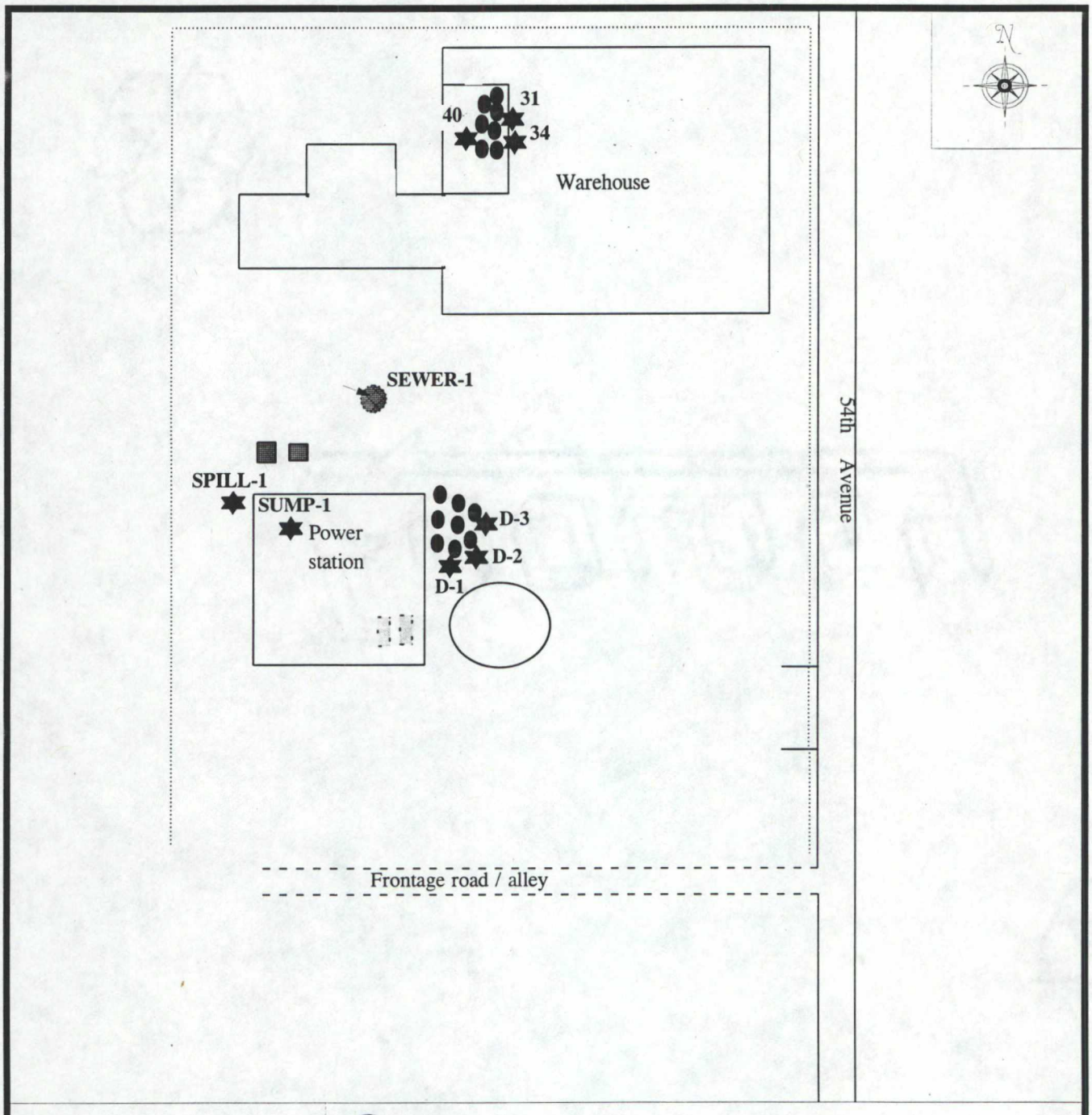
collection. Sample D-1 was a dark oily liquid. Sample D-2 was an opaque green-colored liquid. Sample D-3 was a dark oily liquid. START collected a water sample, sample SEWER-1, from the sewer catch basin located northwest of the power plant building. Sample SPILL-1 was collected from the petroleum-based material located on top of the ground on the northwest exterior corner of the power plant building. Sample SUMP-1 was collected from the interior sump that contained liquid in the northwest corner of the power plant building. Both samples SUMP-1 and SPILL-1 were a dark viscous oily liquid (Figure 3-1).

All samples were analyzed for flash point, diesel range organics (DROs), chlorinated hydrocarbons, and PCBs. START packaged the power plant samples and sent them to EIS Analytical Services in South Bend, Indiana, with a request for an Office of Solid Waster and Emergency Response (OSWER) Quality Assurance (QA) Level II analytical package.

On August 11, 1998, START members Greg Haas and Brendan McLennan were requested to mobilize to the Danley Machines site. The power plant building was boarded up after the initial site visit and the drums located at the exterior of the building were overpacked and moved inside the power plant building. The area of ground that was covered with the petroleum-based product was marked with caution tape, and a drainage ditch west of the power plant building had absorbent boom placed on it to prevent the migration of the petroleum-based product off site. U.S. EPA was informed that the warehouse on the north end of the DM site contained drums with unknown contents. Access had been restricted to the warehouse building during the previous site visit, but it was known that there were an additional 22 drums inside the warehouse on the north side of the property. Access was granted to U.S. EPA and START to enter the warehouse to sample the additional drums. START donned Level B PPE to sample the drums. Initial headspace readings were taken with a PID and a combustible gas indicator (CGI). PID levels were undetectable, while the CGI obtained readings from 0 to 40% of the lower explosive limit (LEL). START collected samples from three of the drums located in the warehouse (Figure 3-1). Sample 31 was a paint-like material with a pink color. The sample occurred in two phases, one oily phase and one pigment phase. Sample 34 was a light-colored oil. Sample 40 was a brown oily sludge with a CGI reading of 20% of the LEL.

The samples collected from the warehouse were analyzed for total Resource Conservation and Recovery Act (RCRA) metals, pH, and flash point. Samples 31 and 34 were analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). Sample 40 was analyzed for polynuclear aromatic hydrocarbons (PAHs). START packaged the warehouse samples and sent

them to Clayton Laboratory Services in Novi, Michigan, with a request for an OSWER QA Level II analytical package.



Legend

★ Sample location

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TITLE: Sample Location Map		FIGURE #: 3-1
SITE: Danley Machines Site		SCALE: Not to scale
CITY: Cicero	STATE: Illinois	TDD: S05-9807-013
SOURCE: Ecology and Environment, Inc.		DATE: 7-23-98

4. Analytical Results

A total of six liquid samples were collected from the DM site, near the power plant, during the initial site assessment. The samples were analyzed for flash point, total petroleum hydrocarbons (TPHs) including DROs, chlorinated hydrocarbons, and PCBs. The analytical results for the initial sampling event are summarized in Table 4-1.

During the second site visit, three additional liquid samples were collected from the site, inside the warehouse. All three additional samples, collected from drums in the warehouse, were analyzed for total RCRA metals, pH, and flash point. Two of the additional warehouse drum samples were analyzed for VOCs and SVOCs. One warehouse drum sample was analyzed for PAHs. The analytical results for the warehouse drum samples are summarized in Table 4-2.

Table 4-1

ANALYTICAL RESULTS SUMMARY
DANLEY MACHINES SITE
CICERO, COOK COUNTY, ILLINOIS

JULY 24, 1998

Parameter	Sample Designation					
	D-1	D-2	D-3	Sump-1	Sewer-1	Spill-1
Flash point (°F)	180	146	145	161	>201	148
Diesel Range Organics (TPH) (mg/kg)	1,240,000	1,130,000	19.5	333,000	3.28	227,000
Cyclohexanone	ND	ND	85.3	ND	ND	ND
Ethylbenzene	ND	650	ND	ND	ND	ND
Isopropylbenzene	ND	540	ND	ND	ND	ND
Isopropyltoluene	ND	1,600	ND	ND	ND	ND
Napthalene	ND	1,920	ND	400	ND	ND
Propylbenzene	ND	820	ND	ND	ND	ND
Toluene	ND	610	ND	ND	ND	ND
Trimethylbenzene (1,2,4)	ND	2,280	ND	ND	ND	ND
Trimethylbenzene (1,3,5)	ND	2,370	ND	ND	ND	ND
Xylenes (meta + para)	ND	1,390	ND	ND	ND	ND
Xylenes (orth.)	ND	660	ND	ND	ND	ND
Chlorinated Hydrocarbons (mg/kg)	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls (PCBs) (mg/kg)	ND	ND	ND	ND	ND	ND

Key:

mg/kg = milligrams per kilogram.
ND = Not detected.

Source: EIS Analytical Services, Inc., South Bend, Indiana. Analytical TDD S05-9807-811

Table 4-2

ANALYTICAL RESULTS SUMMARY
DANLEY MACHINES SITE
CICERO, COOK COUNTY, ILLINOIS

AUGUST 11, 1998

Parameter	Sample Designation		
	31	34	40
Flashpoint (°F)	>200	>200	>200
pH (standard units)	5.6	7.3	7.6
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/kg)	ND	NA	NA
Metals (mg/kg)			
Barium	ND	8	ND
Chromium	2	ND	ND
Semivolatile Organic Compounds (SVOCs) (mg/kg)	ND	ND	NA
Volatile Organic compounds (VOCs) (mg/kg)	ND	ND	NA
Ethylbenzene	ND	0.1	NA
Methylene chloride	ND	38	NA
Toluene	ND	0.4	NA
Xylenes	ND	1	NA
Acetone	580 B	ND	NA

Key:

mg/kg = milligrams per kilogram.
B = Result is estimated, it exceeds the instrument linearity.
ND = Not detected.
NA = Not analyzed.

Source: Clayton Laboratory Services, Novi, Michigan. Analytical TDD S05-9808-806

5. Discussion of Potential Threats

Paragraph (b)(2) of Part 300.415 of the NCP lists factors to be considered when determining the appropriateness of a potential removal action at a site. Section 1002 of Title I of the Oil Pollution Act (OPA) of 1990 establishes liability of responsible parties for removal costs and damages caused by oil spills and discharges into navigable waterways. Subsection (b)(2) of Section 1002 describes the damages covered under OPA. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) applies to the hazardous substances at the DM site. The following discussion presents a summary of those damages which are applicable to the DM site.

CERCLA Threats:

- **Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chains**. Analytical results from samples collected at the site on July 24, 1998, indicate the presence of VOCs and TPHs at the DM site. Two of the three drum samples contained VOCs, including naphthalene at concentrations up to 1,920 mg/kg, toluene at concentrations up to 610 mg/kg, and xylene at concentrations up to 1,390 mg/kg. The sump sample, SUMP-1, contained naphthalene at 400 ppm. The warehouse on the northern part of the site also contained drums with detectable levels of metals and VOCs, including methylene chloride at concentrations up to 38 mg/kg. The DM site is located in a mixed residential/industrial area in Cicero, Cook County, Illinois. A makeshift bed, stove, clothing, books, and canned food indicated the presence of vagrants living on the propert at one time. The site is accessible to pedestrian traffic. The buildings have been locked and boarded up by the site owner, and access to the parts of the property containing hazardous materials is now restricted.

  According to the Agency for Toxic Substance and Disease Registry (ATSDR) toxicological profiles, naphthalene, methylene chloride, toluene, and xylene have the following health effects. Naphthalene can cause hemolytic anemia in humans. Hemolytic anemia has been documented from people who ingested naphthalene-containing mothballs or deodorant blocks. Anemia has also occurred in infants wearing diapers which were stored in mothballs containing naphthalene. Excessive exposure to naphthalene may cause nausea, vomiting, diarrhea, blood in urine, and jaundice. Methylene chloride causes intense burning and mild redness of the skin from dermal contact. The U. S. EPA has determined that methylene chloride is a probable human carcinogen. Toluene causes headaches, confusion, and memory loss.

Exposure to large amounts of toluene for a short time can cause death. Exposure to xylene can affect the kidneys, lungs, and nervous system. People exposed to very high levels of xylene for a short period of time have died.

- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.** Analytical results of the drums stored on the site indicated the presence of VOCs, including naphthalene at concentrations up to 1,920 mg/kg, toluene at concentrations up to 610 mg/kg, and xylene at concentrations up to 1,390 mg/kg. The sump sample, SUMP-1, contained naphthalene at 400 ppm. The warehouse on the northern part of the site also contained drums with detectable levels of metals and VOCs, including methylene chloride at concentrations up to 38 mg/kg. Analytical results of the material found on the ground surface and the drums stored at the site indicated the presence of TPHs at concentrations up to 1,180,000 ppm. A total of 51 drums are located on the site. Two large USTs are also located on the site.
- **Weather conditions that may cause pollutants or contaminants to migrate or be released.** The site contaminants are housed in the interior of abandoned buildings located at the site. The buildings are not heated, and therefore the contaminants are subject to temperature changes which could affect the materials. The outside storage tanks are subject to changes in groundwater levels as a result of rain and runoff. The increased volume of groundwater from runoff could cause a release of these contaminants to the sewer system located northeast of the tanks.
- **Threat of fire or explosion.** The materials are house in abandoned buildings which have been used by vagrants in the past. Evidence at the site suggest that these vagrants have used open fires within the buildings. A fire started at either of the buildings would release the contaminants into the area.

OPA Threats:

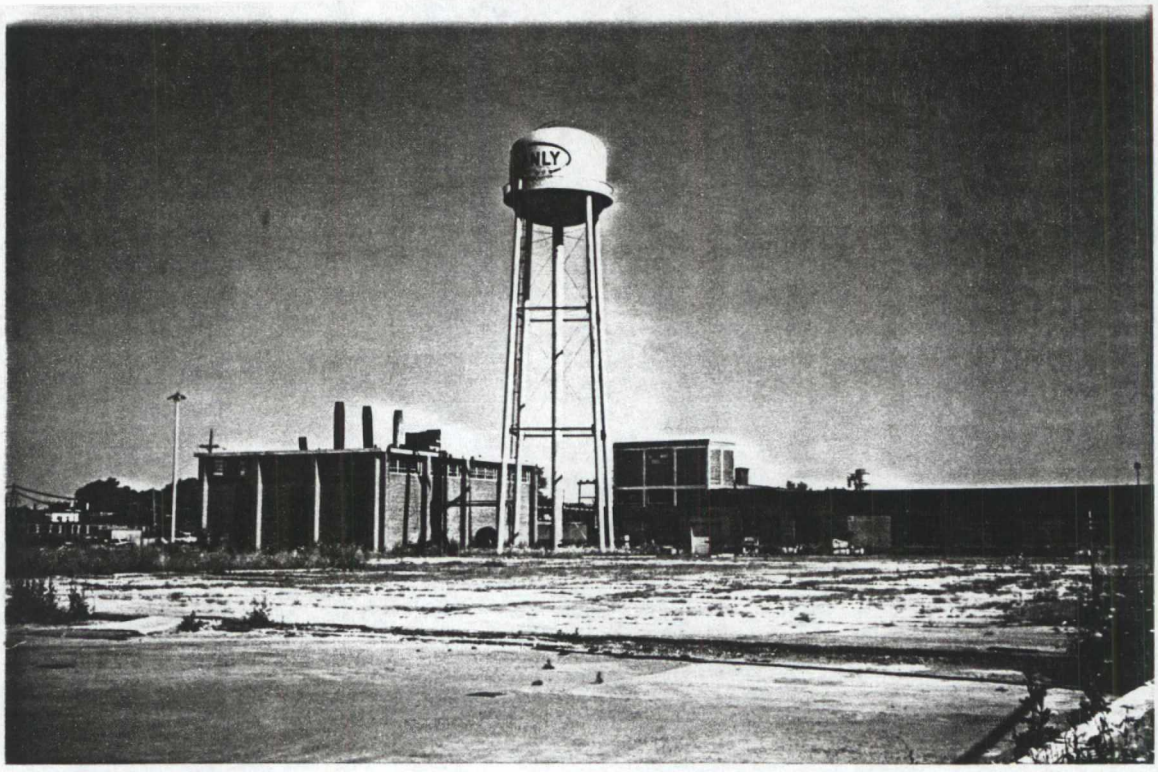
- **Natural resources.** Natural resources are defined as land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other resources. The possible release of the petroleum-based material to the City of Cicero's sewer system would affect the local waterways.
- **Real or personal property.** The Chicago Transit Authority (CTA) property is adjacent to the site. The CTA property is at risk of being impacted by the release of petroleum products onto their property.
- **Public services.** Costs have been incurred for providing increased or additional public services for government agency involvement, including U.S. EPA.

6. Summary

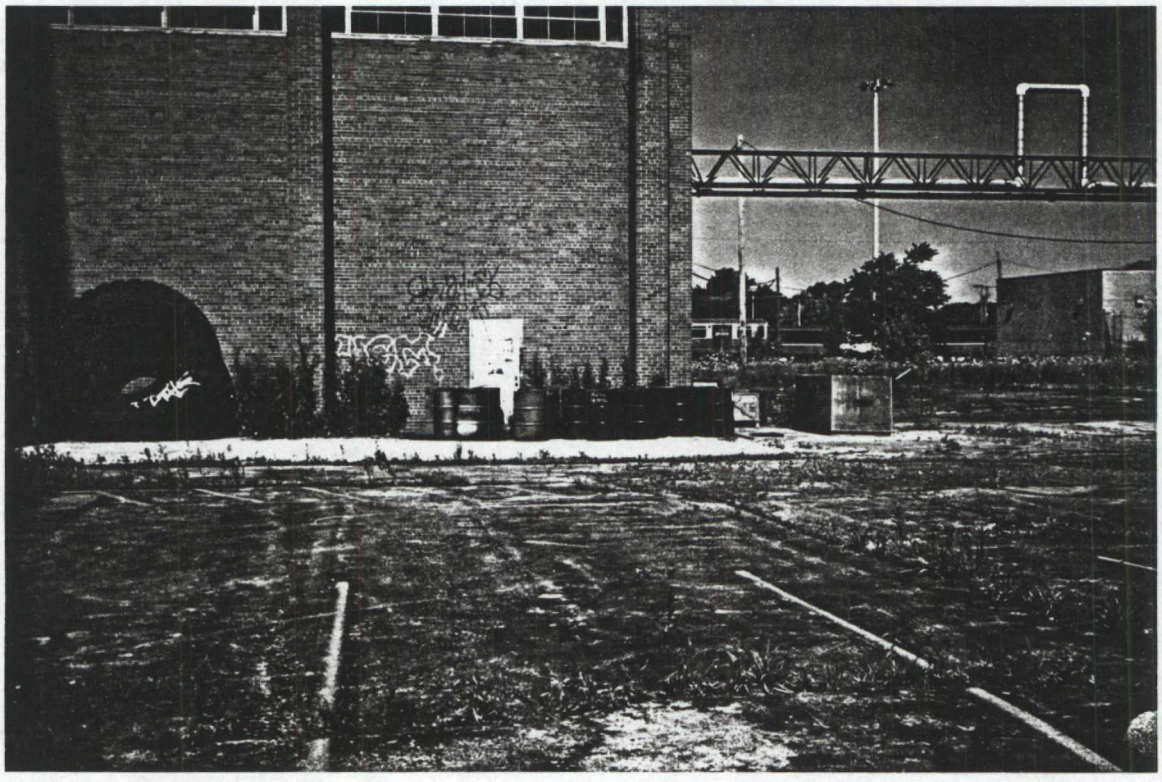
The DM site is the location of a former power plant, warehouse, water tower, and an open lot that had been part of the Danley Machines manufacturing facility. USTs that were utilized by the power plant are leaking a petroleum-based product with TPH concentrations up to 1,180,000 ppm onto the ground near a sewer catch basin on the site. The petroleum-based product is also found in sumps located within the power plant building. Approximately 51 drums were found on the site and some of the drums were contained VOCs. The principal responsible party (PRP) for the site has overpacked and secured the drums located on the site within the site buildings. The buildings have also been secured and access to the site is now restricted.

Appendix A

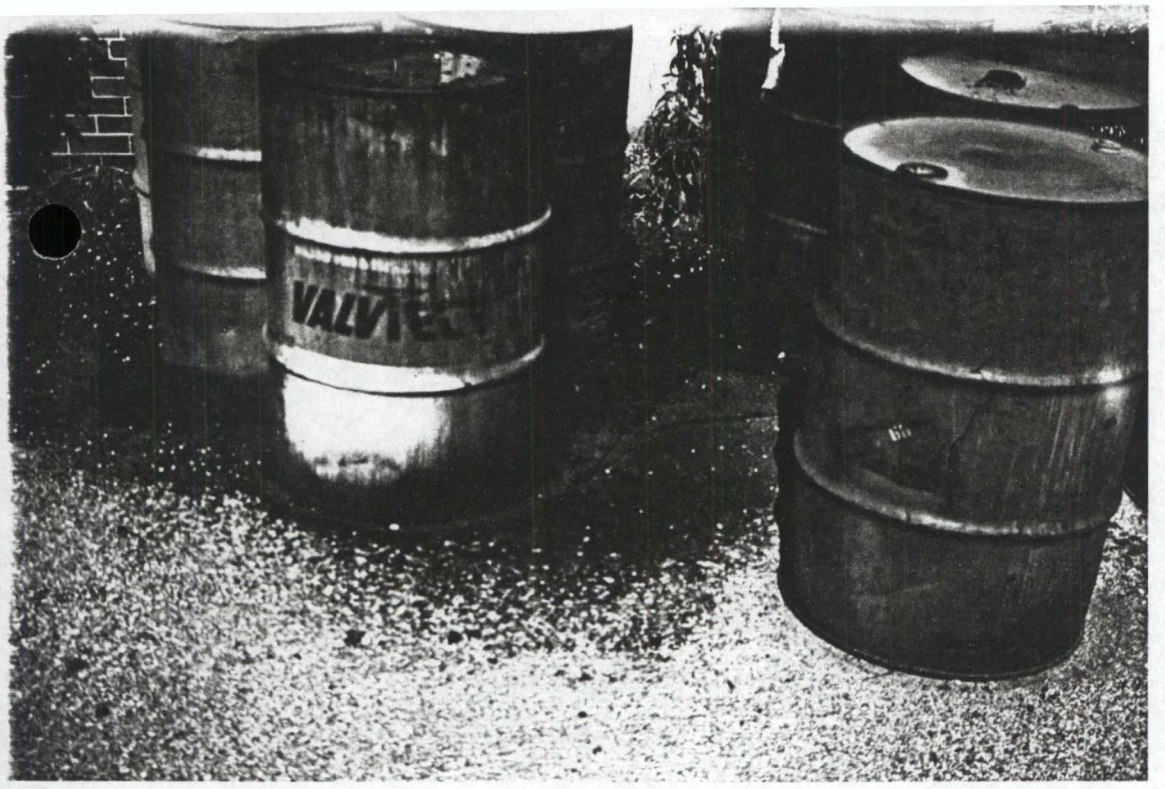
Photodocumentation



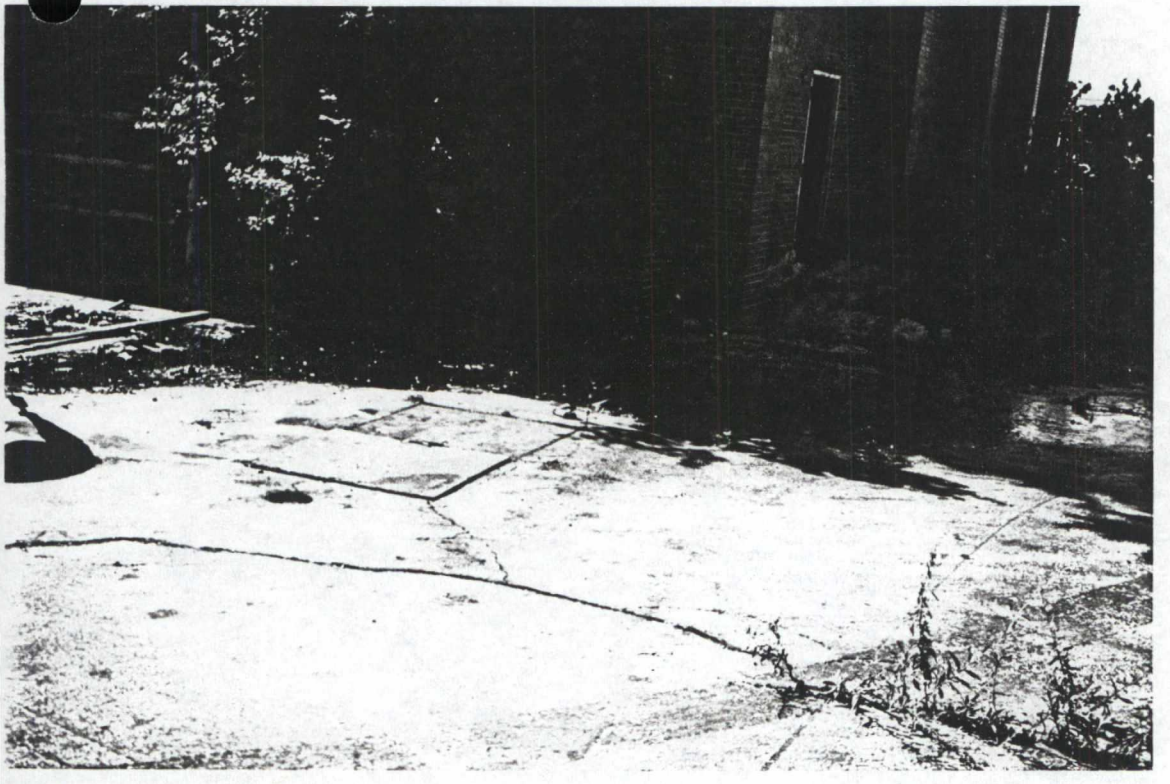
SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 0938
LOCATION: Cicero, IL **DIRECTION:** Northwest **PHOTOGRAPHER:** J. Klemp
SUBJECT: View of entire site.



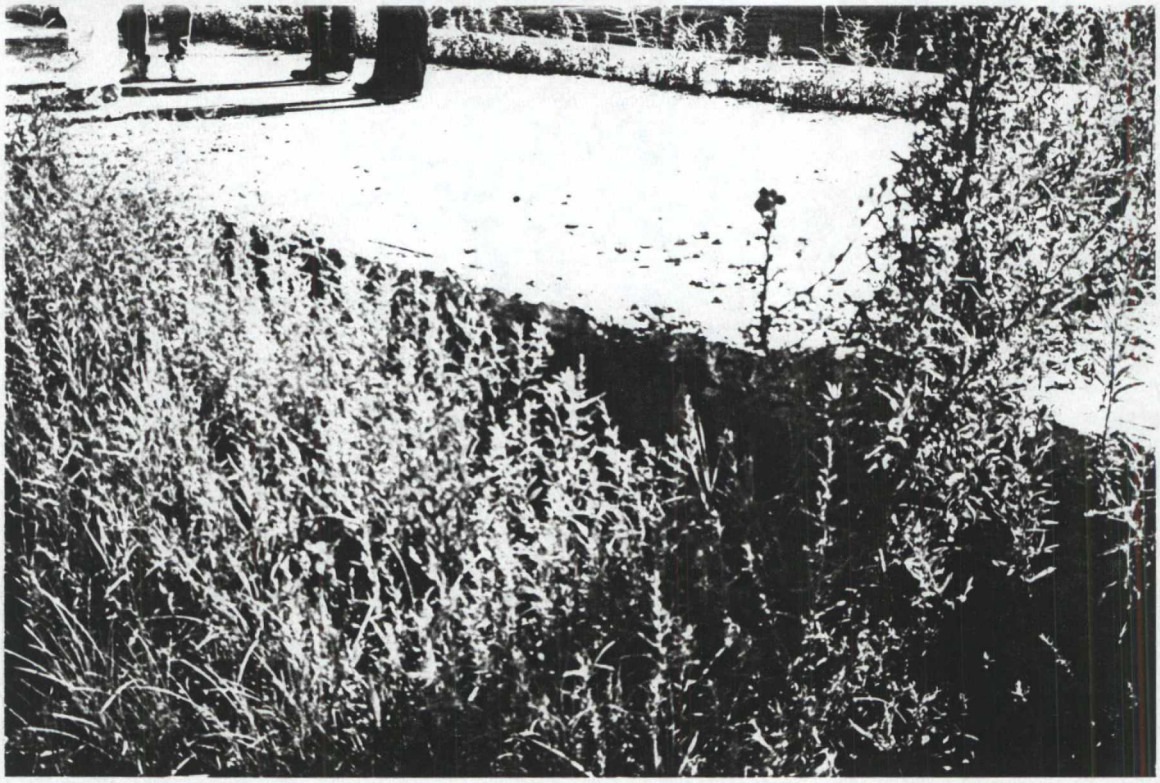
SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 0945
LOCATION: Cicero, IL **DIRECTION:** West **PHOTOGRAPHER:** J. Klemp
SUBJECT: View of drums at northeast corner of building.



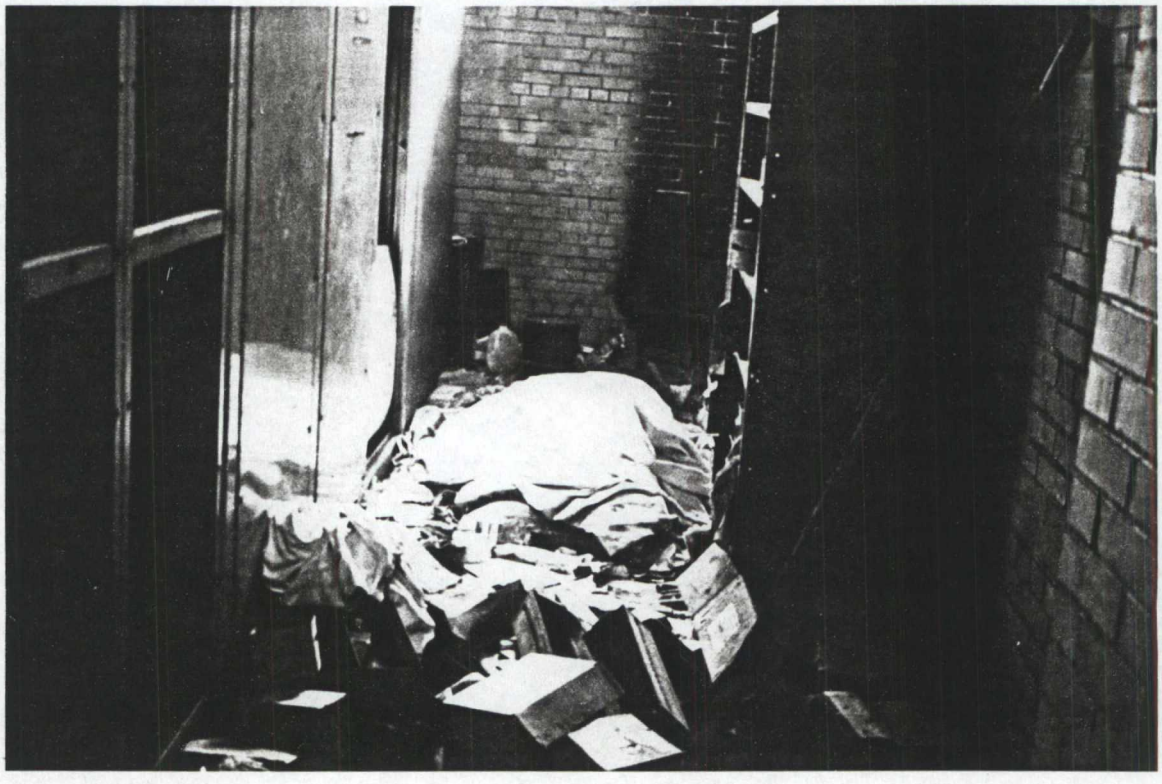
SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 0955
LOCATION: Cicero, IL **DIRECTION:** Down **PHOTOGRAPHER:** J. Klemp
SUBJECT: Staining below drums.



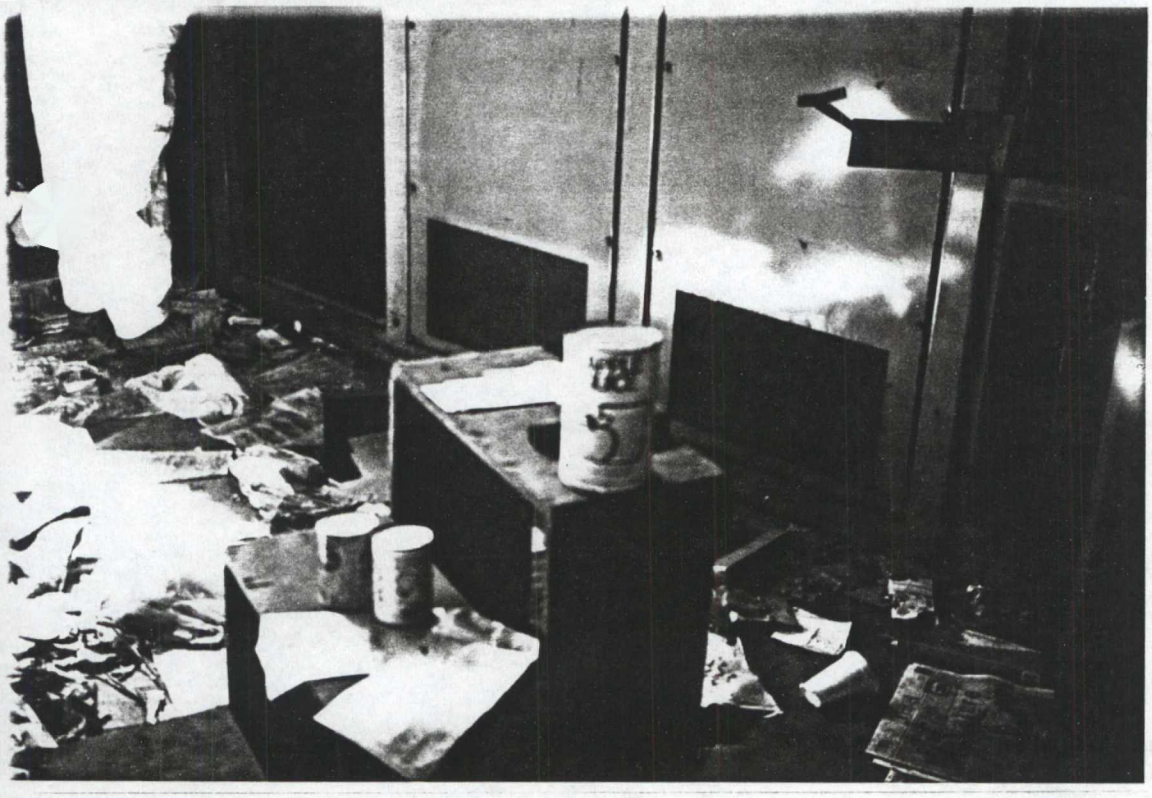
SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1000
LOCATION: Cicero, IL **DIRECTION:** Southeast **PHOTOGRAPHER:** J. Klemp
SUBJECT: Oil being emitted from catch basin.



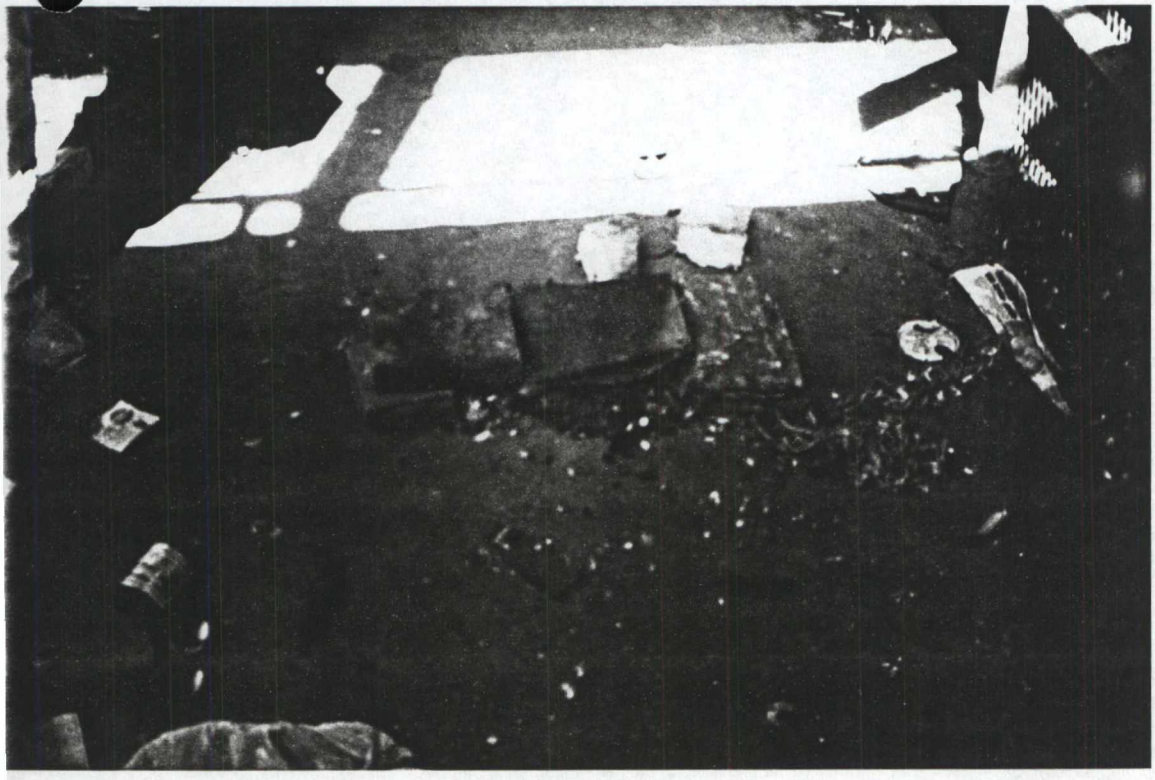
SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1002
LOCATION: Cicero, IL **DIRECTION:** East **PHOTOGRAPHER:** J. Klemp
SUBJECT: Oil seep on west side of foundation wall.



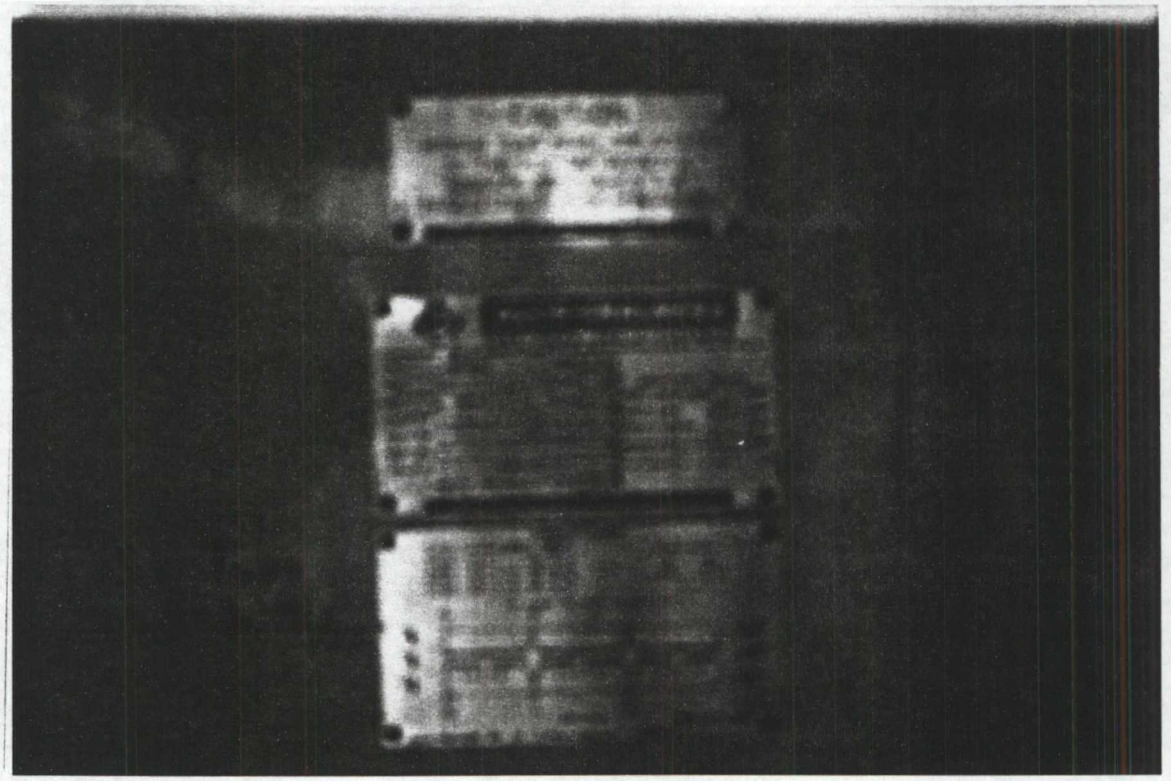
SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1010
LOCATION: Cicero, IL **DIRECTION:** East **PHOTOGRAPHER:** J. Klemp
SUBJECT: Makeshift bed inside power plant building.



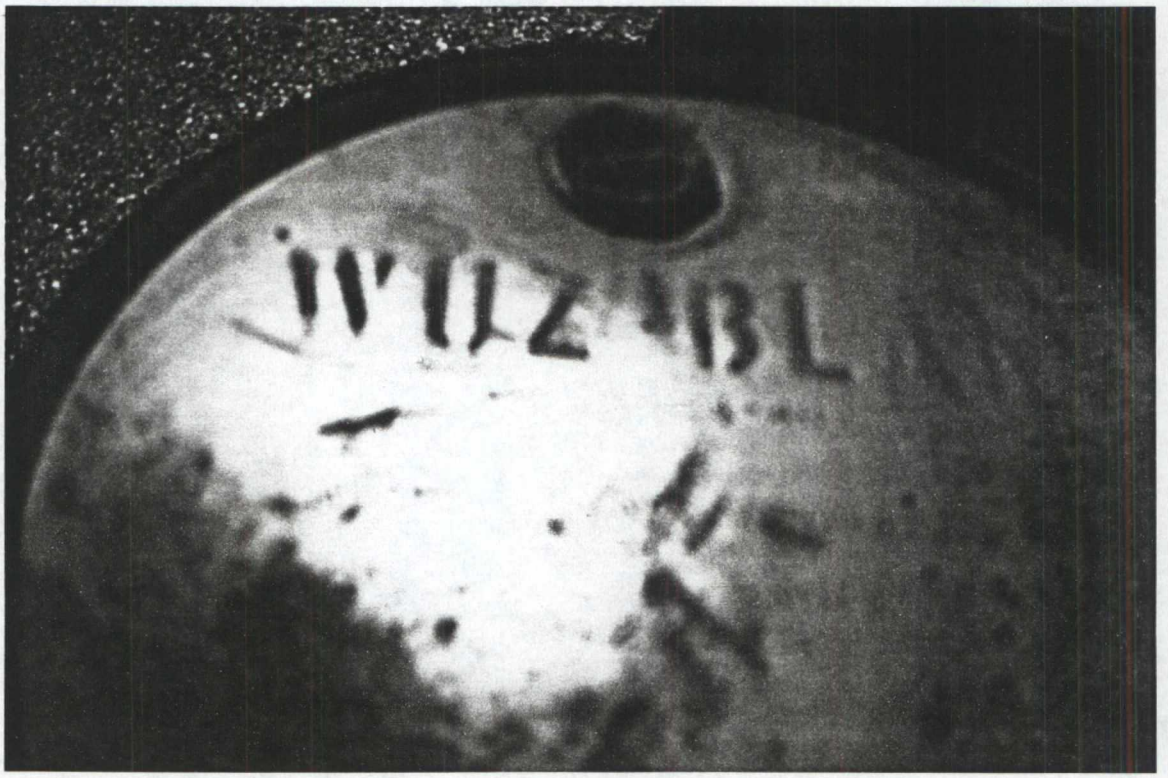
SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1012
LOCATION: Cicero, IL **DIRECTION:** Southeast **PHOTOGRAPHER:** J. Klemp
SUBJECT: Canned food in power plant building.



SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1015
LOCATION: Cicero, IL **DIRECTION:** Down **PHOTOGRAPHER:** J. Klemp
SUBJECT: Makeshift stove in power plant building.



SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1045
LOCATION: Cicero, IL **DIRECTION:** South **PHOTOGRAPHER:** J. Klemp
SUBJECT: Dry-type transformer label.

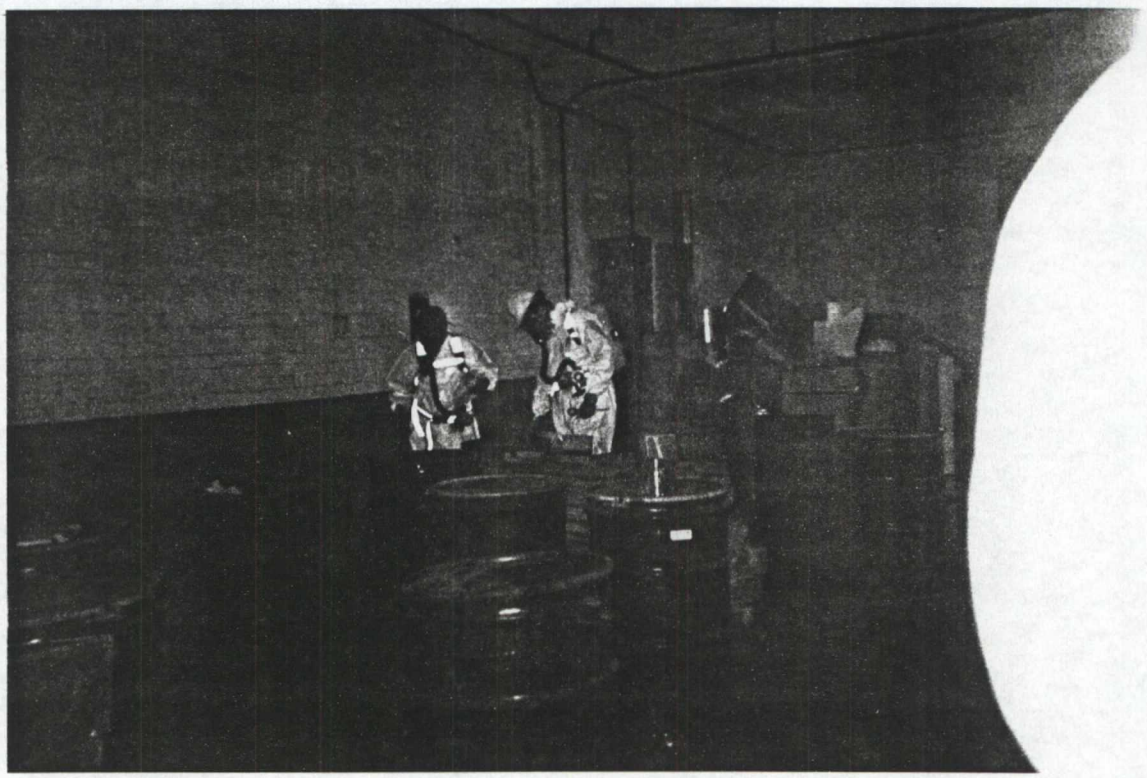


SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1055
LOCATION: Cicero, IL **DIRECTION:** Down **PHOTOGRAPHER:** J. Klemp
SUBJECT: Top of drum with label.

SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1125
LOCATION: Cicero, IL **DIRECTION:** Southwest **PHOTOGRAPHER:** J. Klemp
SUBJECT: START members sampling drums.

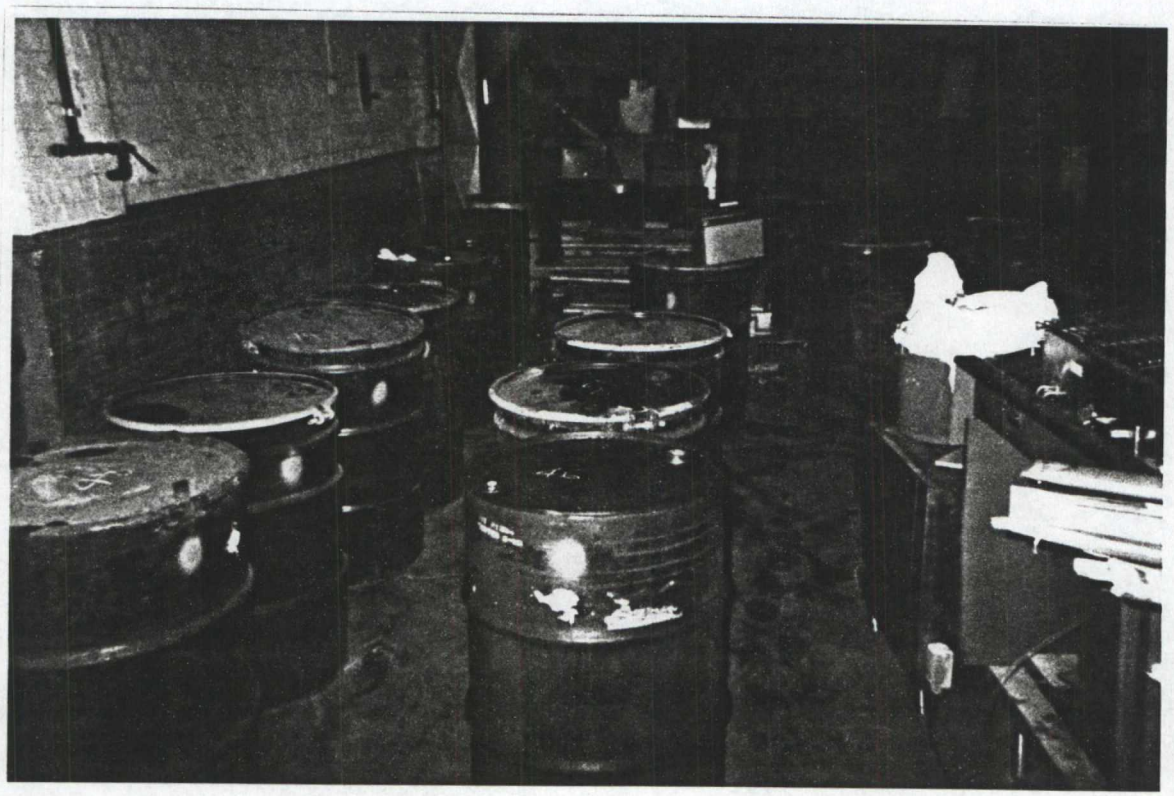
SITE: Danley Machines **DATE:** July 23, 1998 **TIME:** 1130
LOCATION: Cicero, IL **DIRECTION:** West **PHOTOGRAPHER:** J. Klemp
SUBJECT: START members sampling drums.

SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 0900
LOCATION: Cicero, IL **DIRECTION:** West **PHOTOGRAPHER:** C.Gebien
SUBJECT: START members donning level B to enter building.



SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 0915
LOCATION: Cicero, IL **DIRECTION:** Southeast **PHOTOGRAPHER:** C. Gebien
SUBJECT: Drum sampling in warehouse.

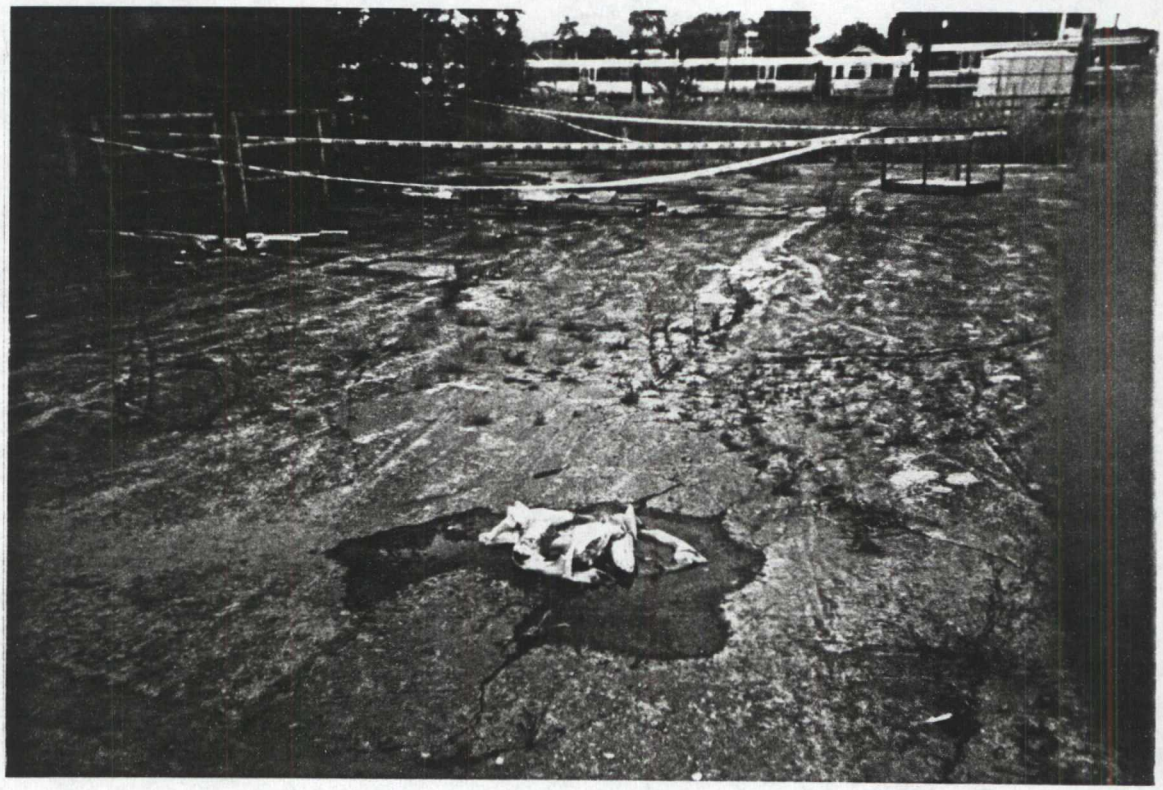
SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 1013
LOCATION: Cicero, IL **DIRECTION:**Down **PHOTOGRAPHER:** C. Gebien
SUBJECT: Drum sample 31.



SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 1030
LOCATION: Cicero, IL **DIRECTION:** South **PHOTOGRAPHER:** C. Gebien
SUBJECT: Drums in warehouse; orange marks signify drums that were opened or attempted to be opened.

SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 0917
LOCATION: Cicero, IL **DIRECTION:** South **PHOTOGRAPHER:** C. Gebien
SUBJECT: Drum sampling in warehouse.

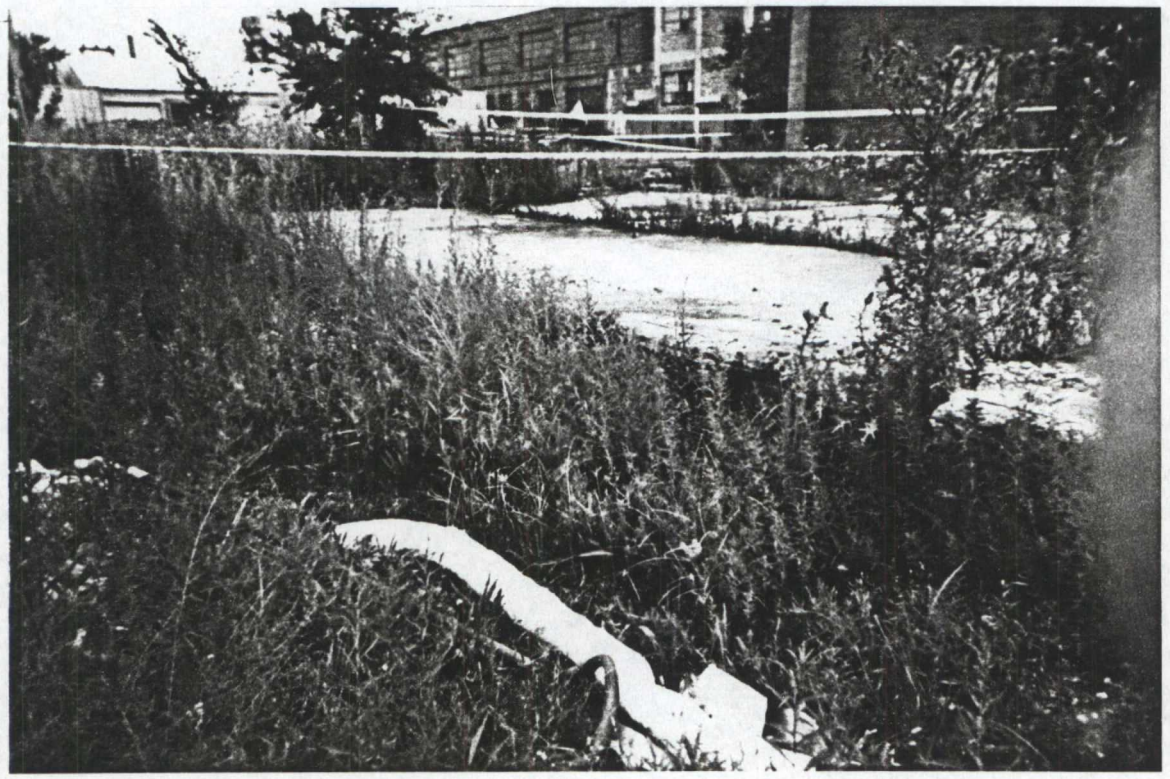
SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 0920
LOCATION: Cicero, IL **DIRECTION:** East **PHOTOGRAPHER:** C. Gebien
SUBJECT: Drum sampling in warehouse.



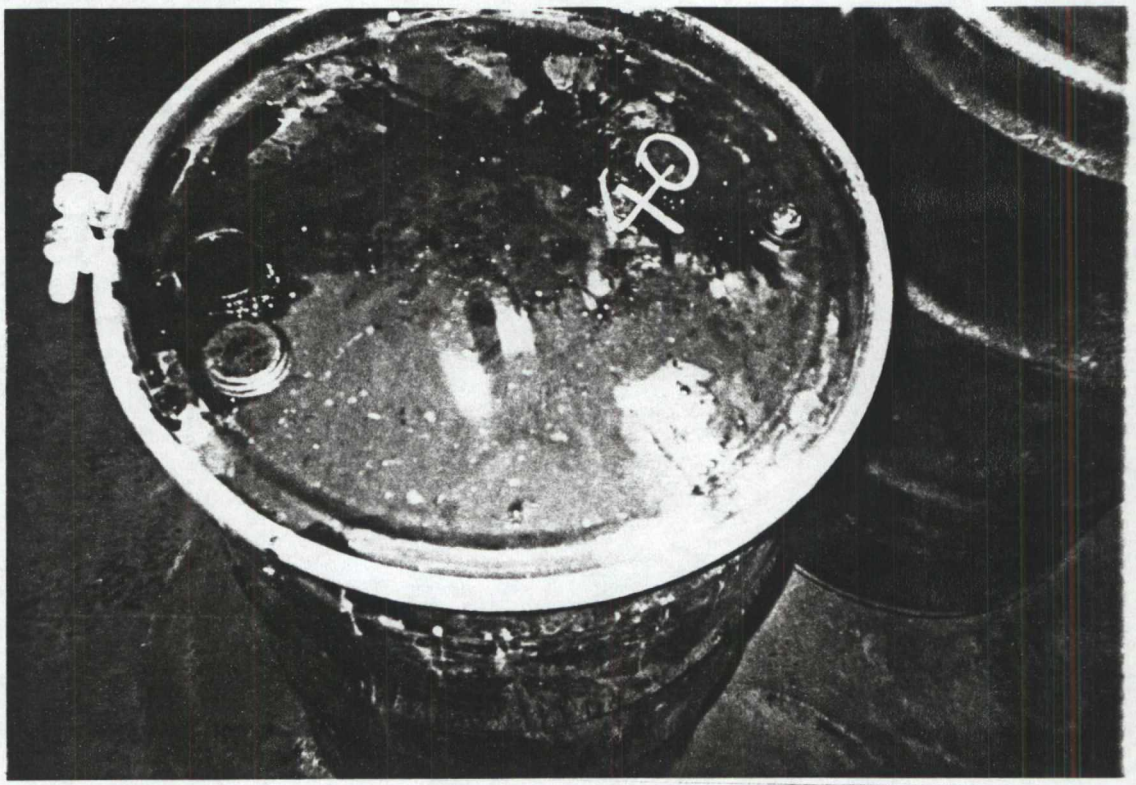
SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 0940
LOCATION: Cicero, IL **DIRECTION:**West **PHOTOGRAPHER:** C. Gebien
SUBJECT: Water on top of sewer cistern north of power plant.

SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 0942
LOCATION: Cicero, IL **DIRECTION:**Southwest **PHOTOGRAPHER:** C. Gebien
SUBJECT: Oily material on ground northwest of power plant.

SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 0943
LOCATION: Cicero, IL **DIRECTION:** Down **PHOTOGRAPHER:** C. Gebien
SUBJECT: Oily material seeping from concrete pad west of power plant.



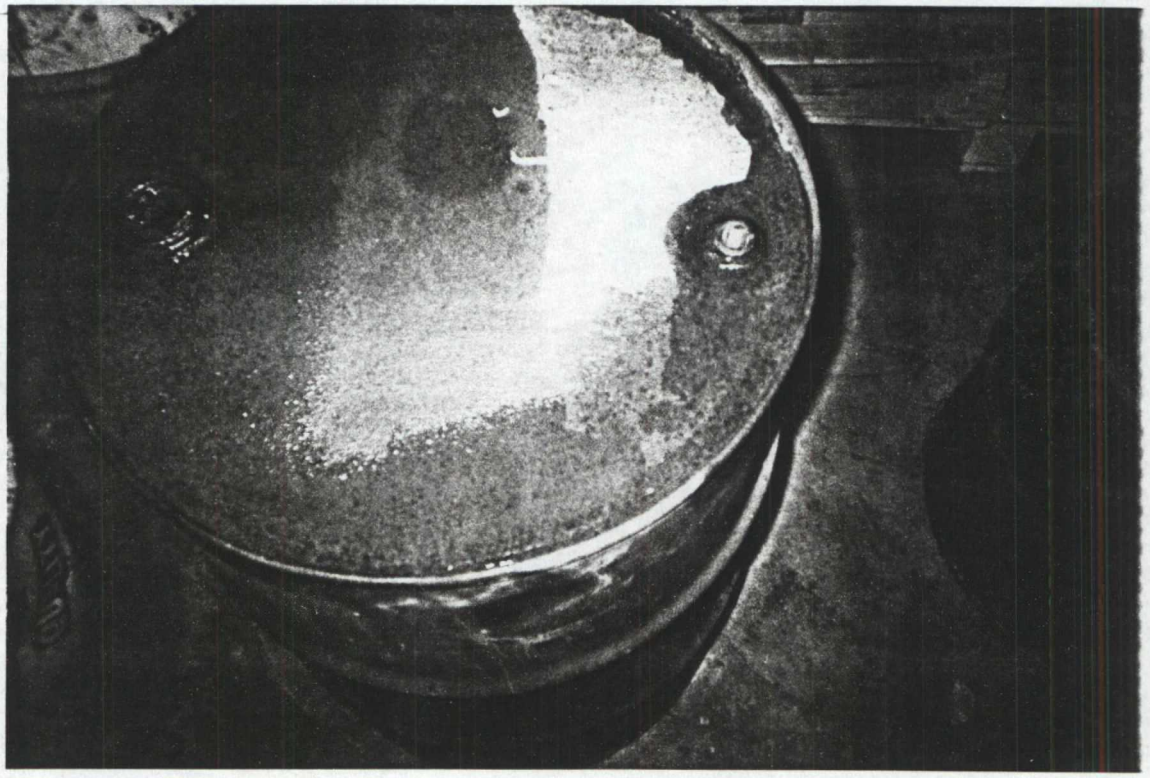
SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 0945
LOCATION: Cicero, IL **DIRECTION:** West **PHOTOGRAPHER:** C. Gebien
SUBJECT: Absorbent boom on ground west of power plant.



SITE: Danley Machines
LOCATION: Cicero, IL
SUBJECT: Drum sample 40.

DATE: August 11, 1998
DIRECTION: Down

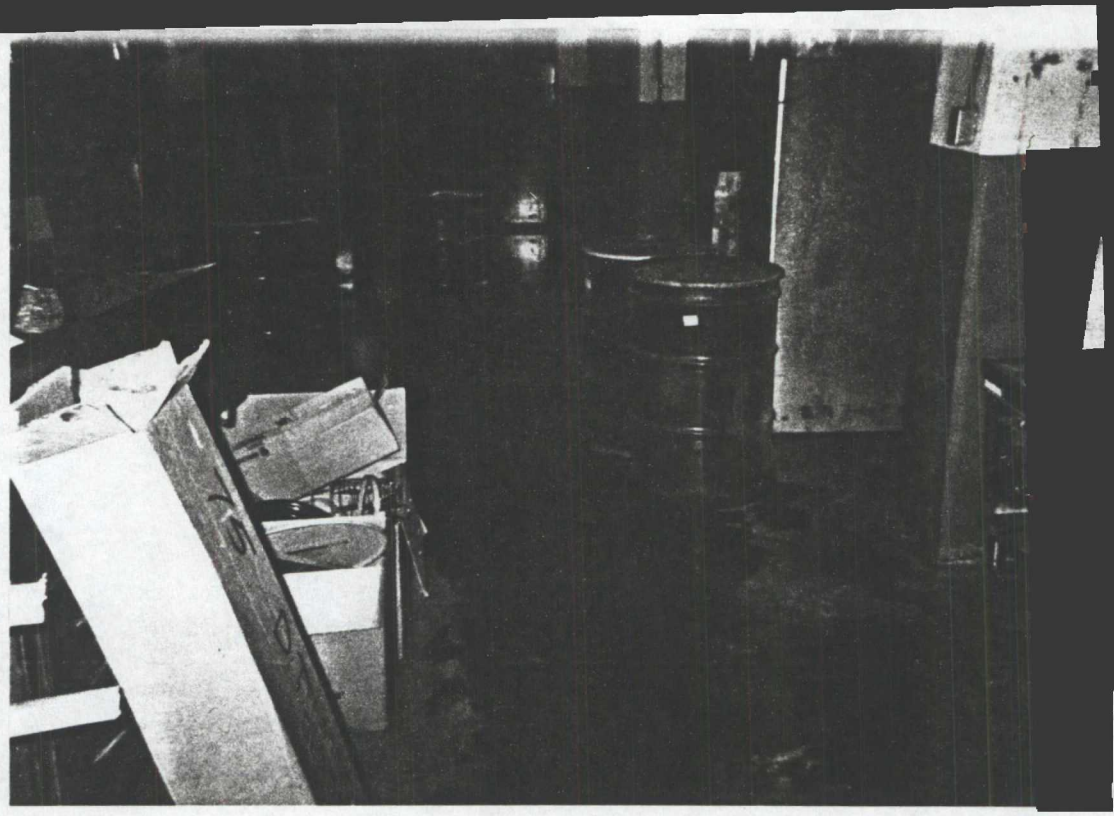
TIME: 1010
PHOTOGRAPHER: C. Gebien



SITE: Danley Machines
LOCATION: Cicero, IL
SUBJECT: Drum sample 34.

DATE: August 11, 1998
DIRECTION: Down

TIME: 1012
PHOTOGRAPHER: C. Gebien



SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 1040
LOCATION: Cicero, IL **DIRECTION:** South **PHOTOGRAPHER:** C. Gebien
SUBJECT: Drums in warehouse with water on ground.

SITE: Danley Machines **DATE:** August 11, 1998 **TIME:** 1045
LOCATION: Cicero, IL **DIRECTION:** South **PHOTOGRAPHER:** C. Gebien
SUBJECT: Drums in warehouse with water on floor.

Appendix B

Analytical Data

ecology and environment, inc.
International Specialists in the Environment

33 North Dearborn Street
Chicago, Illinois 60602
Tel. 312/578-9243, Fax: 312/578-9345

M E M O R A N D U M

DATE: September 24, 1998

TO: Joseph Klemp, START Project Manager, E & E, Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager, E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for Volatile Organic Compounds (VOCs), Danley Machines, Cicero, Cook County, Illinois

REFERENCE: Project TDD S05-9807-013 Analytical TDD S05-9807-811
Project PAN 8U1301SIXX Analytical PAN 8UAK01TAXX

The data quality assurance (QA) review of one solid and five liquid samples collected from the Danley Machines site is complete. The samples were collected on July 24, 1998, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to EIS Analytical Services, Inc., South Bend, Indiana. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8260.

Sample Identification

START Identification No.	Laboratory Identification No.
D-1	52817
D-2	52818
D-3	52820
Sewer-1	52821
Sump-1	52819
Spill-1	52822

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on July 24, 1998, extracted on 1998, and analyzed on August 5 and 6, 1998. This is within the 14-day holding time limit.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning: Acceptable

GC/MS tuning to meet ion abundance criteria using bromofluorobenzene (BFB) were acceptable and samples were analyzed within 12 hours of BFB tuning.

III. Calibrations:

• Initial Calibration: Qualified

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05, except acrolein and cyclohexanone; therefore, the nondetect values for these compounds have been flagged "R", as required. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all detected target compounds, except xylene (m, p); reported values for xylene (m, p) have been flagged "J", as estimated.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 25%, as required for detected target compounds.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention times of the internal standards were within the 30-second control limit.

VI. Compound Identification: Acceptable

The mass spectra and retention times of the detected compounds matched those of the standards.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples and blank were within laboratory-established guidelines.

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 5.0, VOAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use, with the above-stated qualifications.

Data Qualifiers and Definitions:

J - The associated numerical value is an estimated quantity because the reported concentrations were less than required detection limits or quality control criteria were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

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International Specialists in the Environment

33 North Dearborn Street
Chicago, Illinois 60602
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M E M O R A N D U M

DATE: September 24, 1998

TO: Joseph Klemp, START Project Manager, E & E, Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager, E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Total Petroleum Hydrocarbons (TPH) as Diesel Range Organics, Danley Machines, Cicero, Cook County, Illinois

REFERENCE: Project TDD S05-9807-013 Analytical TDD S05-9807-811
Project PAN 8U1301SIXX Analytical PAN 8UAK01TAXX

The data quality assurance (QA) review of one solid and five liquid samples collected from the Danley Machines site is complete. The samples were collected on July 24, 1998, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to EIS Analytical Services, Inc., South Bend, Indiana. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8015.

Sample Identification

START Identification No.	Laboratory Identification No.
D-1	52817
D-2	52818
D-3	52820
Sewer-1	52821
Sump-1	52819
Spill-1	52822

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on July 24, 1998, and analyzed on August 4, 1998. This is within the 14-day holding time limit, from collection to analysis.

II. Instrument Performance: Acceptable

The chromatographic resolution was adequate in the standard and sample chromatograms.

III. Calibrations:

- Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSDs) between response factors were less than 20%.

- Continuing Calibration: Acceptable

The percent recoveries of diesel standards were within 85% to 115%.

IV. Blank: Acceptable

A method blank was analyzed with the sample. No target compounds or contaminants were detected in the blank.

V. Compound Identification: Acceptable

The chromatographic patterns of the TPH detected in the samples matched those of the standards.

VI. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.

ecology and environment, inc.
International Specialists in the Environment

33 North Dearborn Street
Chicago, Illinois 60602
Tel. 312/578-9243, Fax: 312/578-9345

M E M O R A N D U M

DATE: September 24, 1998

TO: Joseph Klemp, START Project Manager, E & E, Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager, E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Polychlorinated Biphenyls (PCBs), Danley Machines, Cicero, Cook County, Illinois

REFERENCE: Project TDD S05-9807-013 Analytical TDD S05-9807-811
Project PAN 8U1301SIXX Analytical PAN 8UAK01TAXX

The data quality assurance (QA) review of one solid and five liquid samples collected from the Danley Machines site is complete. The samples were collected on July 24, 1998, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to EIS Analytical Services, Inc., South Bend, Indiana. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8082.

Sample Identification

START Identification No.	Laboratory Identification No.
D-1	52817
D-2	52818
D-3	52820
Sewer-1	52821
Sump-1	52819
Spill-1	52822

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on July 24, 1998, and analyzed

on August 5, 1998. This is within the 14-day holding time limit, from collection to analysis.

II. Instrument Performance: Acceptable

The chromatographic resolution was adequate in the standard and sample chromatograms. Surrogate retention times were consistent in the samples and standards.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSDs) between response factors were less than 20% for all PCBs.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 15%, for detected PCBs.

IV. Blank: Acceptable

A method blank was analyzed with the sample. No target compounds or contaminants were detected in the blank.

V. Compound Identification: Not Applicable

There were no detected PCBs in the samples.

VI. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples were within acceptable laboratory limits.

VII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 7.0, PCBs. Based upon the information provided, the data are acceptable for use.

ecology and environment, inc.
International Specialists in the Environment

33 North Dearborn Street
Chicago, Illinois 60602
Tel. 312/578-9243, Fax: 312/578-9345

M E M O R A N D U M

DATE: September 24, 1998

TO: Joseph Klemp, START Project Manager, E & E, Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager, E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Flash Point, Danley Machines, Cicero, Cook County, Illinois

REFERENCE: Project TDD S05-9807-013 Analytical TDD S05-9807-811
Project PAN 8U1301SIXX Analytical PAN 8UAK01TAXX

The data quality assurance (QA) review of one solid and five liquid samples collected from the Danley Machines site is complete. The samples were collected on July 24, 1998, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to EIS Analytical Services, Inc., South Bend, Indiana. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 1010.

Sample Identification

START Identification No.	Laboratory Identification No.
D-1	52817
D-2	52818
D-3	52820
Sewer-1	52821
Sump-1	52819
Spill-1	52822

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on July 24, 1998, and analyzed on August 13, 1998. The Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) does not specify a holding time for this parameter.

II. Calibrations: Acceptable

The calibration for flash point was verified before sample analyses using xylene as a standard. The observed flash point for xylene was within acceptable laboratory limits.

III. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in OSWER Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.

SAMPLE RESULTS

CLIENT SAMPLE ID: D-1 SW Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052817
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Ignitability (Closed Cup)	181	Fahrenheit			SzkarlatM	8/13/98	1010
TPH	1240000	ppm	200000	20	CarlsenS	8/4/98	8015 M

SAMPLE RESULTS

CLIENT SAMPLE ID: D-1 SW Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052817
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
POLYCHLORINATED BIPHENYLS							
PCB (AR1016)	nd	ppm	5	2	DavisW	8/5/98	8082
PCB (AR1221)	nd	ppm	5	2	DavisW	8/5/98	8082
PCB (AR1232)	nd	ppm	5	2	DavisW	8/5/98	8082
PCB (AR1242)	nd	ppm	5	2	DavisW	8/5/98	8082
PCB (AR1248)	nd	ppm	5	2	DavisW	8/5/98	8082
PCB (AR1254)	nd	ppm	5	2	DavisW	8/5/98	8082
PCB (AR1260)	nd	ppm	5	2	DavisW	8/5/98	8082

SAMPLE RESULTS

CLIENT SAMPLE ID: D-1 SW Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052817
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
VOLATILE ORGANICS							
Acetone	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
Acrolein	nd R	ppm	16000	1000	WilliamsJ	8/6/98	8260 B
Acrylonitrile	nd	ppm	16000	1000	WilliamsJ	8/6/98	8260 B
Benzene	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Bromobenzene	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Bromochloromethane	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Bromodichloromethane	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Bromoform	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Bromomethane	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Butylbenzene (normal)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Butylbenzene (sec)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Butylbenzene (tert)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
arbon disulfide	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
rbon Tetrachloride	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
hlorobenzene	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
loroethane	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Chloroethyl vinyl ether (2)	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
Chloroform	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Chlorohexane (1)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Chloromethane	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
Chlorotoluene (2)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Chlorotoluene (4)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Cyclohexanone	nd R	ppm	80000	5000	WilliamsJ	8/6/98	8260 B
Dibromo-3-chloropropane (1,2)	nd	ppm	24000	1500	WilliamsJ	8/6/98	8260 B
Dibromochloromethane	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Dibromoethane (1,2)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Dibromomethane	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Dichloro-2-butene (1,4)	nd	ppm	24000	1500	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,2)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,3)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,4)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Dichlorodifluoromethane	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Dichloroethane (1,1)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Dichloroethane (1,2)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
hloroethene (1,1)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
ichloroethene (c-1,2)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
hloroethene (t-1,2)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
ichlorofluoromethane	nd	ppm	4000	250	WilliamsJ	8/6/98	8260 B
Dichloropropane (1,2)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Dichloropropane (1,3)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: D-1 SW Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052817
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Dichloropropane (2,2)	nd	ppm	4000	250	WilliamsJ	8/6/98	8260 B
Dichloropropene (1,1)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Dichloropropene (c-1,3)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Dichloropropene (t-1,3)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Diethyl ether	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
Ethyl methacrylate	nd	ppm	4000	250	WilliamsJ	8/6/98	8260 B
Ethylbenzene	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Heptane (normal)	nd	ppm	4000	250	WilliamsJ	8/6/98	8260 B
Hexachlorobutadiene	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Hexanone (2-)	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
Iodomethane	nd	ppm	4000	250	WilliamsJ	8/6/98	8260 B
Isopropylbenzene	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Isopropyltoluene (para)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Methyl Ethyl Ketone (MEK)	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
ıthyl Isobutyl Ketone (MIBK)	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
Methyl methacrylate	nd	ppm	4000	250	WilliamsJ	8/6/98	8260 B
ıthylbutylether (tert) (MTBE)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
ıethylene chloride	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Naphthalene	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Propylbenzene (normal)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Styrene	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Tetrachloroethane (1,1,1,2)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Tetrachloroethane (1,1,2,2)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Tetrachloroethene	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Tetrahydrofuran	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
Toluene	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
TPH	832000	ppm	160000	10000	WilliamsJ	8/6/98	8260 B
Trichlorobenzene (1,2,3)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Trichlorobenzene (1,2,4)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Trichloroethane (1,1,1)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Trichloroethane (1,1,2)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Trichloroethene	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Trichlorofluoromethane	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Trichloropropane (1,2,3)	nd	ppm	4000	250	WilliamsJ	8/6/98	8260 B
Trichlorotrifluoroethane	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
ımethylbenzene (1,2,4)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
ımethylbenzene (1,3,5)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
ıyl acetate	nd	ppm	8000	500	WilliamsJ	8/6/98	8260 B
ıyl Chloride	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B
Xylene (ortho)	nd	ppm	800	50	WilliamsJ	8/6/98	8260 B
Xylenes (meta + para)	nd	ppm	1600	100	WilliamsJ	8/6/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: D-2 South Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052818
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Ignitability (Closed Cup)	146	Fahrenheit			SzkarlatM	8/13/98	1010
TPH	1130000	ppm	270000	20	CarlsenS	8/4/98	8015 M

SAMPLE RESULTS

CLIENT SAMPLE ID: D-2 South Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052818
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
POLYCHLORINATED BIPHENYLS							
PCB (AR1016)	nd	ppm	2.5	2	DavisW	8/5/98	8082
PCB (AR1221)	nd	ppm	2.5	2	DavisW	8/5/98	8082
PCB (AR1232)	nd	ppm	2.5	2	DavisW	8/5/98	8082
PCB (AR1242)	nd	ppm	2.5	2	DavisW	8/5/98	8082
PCB (AR1248)	nd	ppm	2.5	2	DavisW	8/5/98	8082
PCB (AR1254)	nd	ppm	2.5	2	DavisW	8/5/98	8082
PCB (AR1260)	nd	ppm	2.5	2	DavisW	8/5/98	8082

SAMPLE RESULTS

CLIENT SAMPLE ID: D-2 South Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052818
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
VOLATILE ORGANICS							
Acetone	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
Acrolein	nd R	ppm	4000	1000	WilliamsJ	8/5/98	8260 B
Acrylonitrile	nd	ppm	4000	1000	WilliamsJ	8/5/98	8260 B
Benzene	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Bromobenzene	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Bromochloromethane	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Bromodichloromethane	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Bromoform	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Bromomethane	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Butylbenzene (normal)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Butylbenzene (sec)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Butylbenzene (tert)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Carbon disulfide	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Carbon Tetrachloride	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Chlorobenzene	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Chloroethane	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Chloroethyl vinyl ether (2)	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
Chloroform	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Chlorohexane (1)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Chloromethane	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
Chlorotoluene (2)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Chlorotoluene (4)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Cyclohexanone	nd R	ppm	20000	5000	WilliamsJ	8/5/98	8260 B
Dibromo-3-chloropropane (1,2)	nd	ppm	6000	1500	WilliamsJ	8/5/98	8260 B
Dibromochloromethane	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Dibromoethane (1,2)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Dibromomethane	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Dichloro-2-butene (1,4)	nd	ppm	6000	1500	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,2)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,3)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,4)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Dichlorodifluoromethane	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Dichloroethane (1,1)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Dichloroethane (1,2)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Dichloroethene (1,1)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Dichloroethene (c-1,2)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Dichloroethene (t-1,2)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Dichlorofluoromethane	nd	ppm	1000	250	WilliamsJ	8/5/98	8260 B
Dichloropropane (1,2)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Dichloropropane (1,3)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: D-2 South Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052818
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Dichloropropane (2,2)	nd	ppm	1000	250	WilliamsJ	8/5/98	8260 B
Dichloropropene (1,1)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Dichloropropene (c-1,3)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Dichloropropene (t-1,3)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Diethyl ether	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
Ethyl methacrylate	nd	ppm	1000	250	WilliamsJ	8/5/98	8260 B
Ethylbenzene	650	ppm	200	50	WilliamsJ	8/5/98	8260 B
Heptane (normal)	nd	ppm	1000	250	WilliamsJ	8/5/98	8260 B
Hexachlorobutadiene	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Hexanone (2-)	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
Iodomethane	nd	ppm	1000	250	WilliamsJ	8/5/98	8260 B
Isopropylbenzene	540	ppm	400	100	WilliamsJ	8/5/98	8260 B
Isopropyltoluene (para)	1600	ppm	400	100	WilliamsJ	8/5/98	8260 B
Methyl Ethyl Ketone (MEK)	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
thyl Isobutyl Ketone (MIBK)	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
ıethyl methacrylate	nd	ppm	1000	250	WilliamsJ	8/5/98	8260 B
ethylbutylether (tert) (MTBE)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
ıethylene chloride	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Naphthalene	1920	ppm	400	100	WilliamsJ	8/5/98	8260 B
Propylbenzene (normal)	820	ppm	200	50	WilliamsJ	8/5/98	8260 B
Styrene	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Tetrachloroethane (1,1,1,2)	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Tetrachloroethane (1,1,2,2)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Tetrachloroethene	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Tetrahydrofuran	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
Toluene	610	ppm	200	50	WilliamsJ	8/5/98	8260 B
TPH	1180000	ppm	40000	10000	WilliamsJ	8/5/98	8260 B
Trichlorobenzene (1,2,3)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Trichlorobenzene (1,2,4)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Trichloroethane (1,1,1)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Trichloroethane (1,1,2)	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Trichloroethene	nd	ppm	200	50	WilliamsJ	8/5/98	8260 B
Trichlorofluoromethane	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Trichloropropane (1,2,3)	nd	ppm	1000	250	WilliamsJ	8/5/98	8260 B
Trichlorotrifluoroethane	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
ımethylbenzene (1,2,4)	2280	ppm	400	100	WilliamsJ	8/5/98	8260 B
ımethylbenzene (1,3,5)	2370	ppm	400	100	WilliamsJ	8/5/98	8260 B
nyl acetate	nd	ppm	2000	500	WilliamsJ	8/5/98	8260 B
nyl Chloride	nd	ppm	400	100	WilliamsJ	8/5/98	8260 B
Xylene (ortho)	660	ppm	200	50	WilliamsJ	8/5/98	8260 B
Xylenes (meta + para)	1390 J	ppm	400	100	WilliamsJ	8/5/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: Sump-1 NW Intertor Sump
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052819
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Ignitability (Closed Cup)	161	Fahrenheit			SzkarlatM	8/13/98	1010
TPH	333000	ppm	90000	20	CarlsenS	8/5/98	8015 M

SAMPLE RESULTS

CLIENT SAMPLE ID: Sump-1 NW Intertor Sump
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052819
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
POLYCHLORINATED BIPHENYLS							
PCB (AR1016)	nd	ppm	2	2	DavisW	8/5/98	8082
PCB (AR1221)	nd	ppm	2	2	DavisW	8/5/98	8082
PCB (AR1232)	nd	ppm	2	2	DavisW	8/5/98	8082
PCB (AR1242)	nd	ppm	2	2	DavisW	8/5/98	8082
PCB (AR1248)	nd	ppm	2	2	DavisW	8/5/98	8082
PCB (AR1254)	nd	ppm	2	2	DavisW	8/5/98	8082
PCB (AR1260)	nd	ppm	2	2	DavisW	8/5/98	8082

SAMPLE RESULTS

CLIENT SAMPLE ID: Sump-1 NW Intertor Sump
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052819
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
VOLATILE ORGANICS							
Acetone	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
Acrolein	nd R	ppm	1000	1000	WilliamsJ	8/6/98	8260 B
Acrylonitrile	nd	ppm	1000	1000	WilliamsJ	8/6/98	8260 B
Benzene	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Bromobenzene	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Bromochloromethane	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Bromodichloromethane	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Bromoform	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Bromomethane	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Butylbenzene (normal)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Butylbenzene (sec)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Butylbenzene (tert)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Carbon disulfide	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Carbon Tetrachloride	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Chlorobenzene	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Chloroethane	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Chloroethyl vinyl ether (2)	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
Chloroform	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Chlorohexane (1)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Chloromethane	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
Chlorotoluene (2)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Chlorotoluene (4)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Cyclohexanone	nd R	ppm	5000	5000	WilliamsJ	8/6/98	8260 B
Dibromo-3-chloropropane (1,2)	nd	ppm	1500	1500	WilliamsJ	8/6/98	8260 B
Dibromochloromethane	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Dibromoethane (1,2)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Dibromomethane	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Dichloro-2-butene (1,4)	nd	ppm	1500	1500	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,2)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,3)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,4)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Dichlorodifluoromethane	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Dichloroethane (1,1)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Dichloroethane (1,2)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Dichloroethene (1,1)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Dichloroethene (c-1,2)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Dichloroethene (t-1,2)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Dichlorofluoromethane	nd	ppm	250	250	WilliamsJ	8/6/98	8260 B
Dichloropropane (1,2)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Dichloropropane (1,3)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: Sump-1 NW Intertor Sump
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052819
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Dichloropropane (2,2)	nd	ppm	250	250	WilliamsJ	8/6/98	8260 B
Dichloropropene (1,1)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Dichloropropene (c-1,3)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Dichloropropene (t-1,3)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Diethyl ether	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
Ethyl methacrylate	nd	ppm	250	250	WilliamsJ	8/6/98	8260 B
Ethylbenzene	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Heptane (normal)	nd	ppm	250	250	WilliamsJ	8/6/98	8260 B
Hexachlorobutadiene	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Hexanone (2-)	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
Iodomethane	nd	ppm	250	250	WilliamsJ	8/6/98	8260 B
Isopropylbenzene	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Isopropyltoluene (para)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Methyl Ethyl Ketone (MEK)	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
ethyl Isobutyl Ketone (MIBK)	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
Methyl methacrylate	nd	ppm	250	250	WilliamsJ	8/6/98	8260 B
thylbutylether (tert) (MTBE)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Methylene chloride	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Naphthalene	400	ppm	100	100	WilliamsJ	8/6/98	8260 B
Propylbenzene (normal)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Styrene	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Tetrachloroethane (1,1,1,2)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Tetrachloroethane (1,1,2,2)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Tetrachloroethene	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Tetrahydrofuran	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
Toluene	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
TPH	54800	ppm	10000	10000	WilliamsJ	8/6/98	8260 B
Trichlorobenzene (1,2,3)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Trichlorobenzene (1,2,4)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Trichloroethane (1,1,1)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Trichloroethane (1,1,2)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Trichloroethene	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Trichlorofluoromethane	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Trichloropropane (1,2,3)	nd	ppm	250	250	WilliamsJ	8/6/98	8260 B
Trichlorotrifluoroethane	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
methylbenzene (1,2,4)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
rimethylbenzene (1,3,5)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
nyl acetate	nd	ppm	500	500	WilliamsJ	8/6/98	8260 B
Vinyl Chloride	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B
Xylene (ortho)	nd	ppm	50	50	WilliamsJ	8/6/98	8260 B
Xylenes (meta + para)	nd	ppm	100	100	WilliamsJ	8/6/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: D-3 Middle Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052820
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Ignitability (Closed Cup)	145	Fahrenheit			SzkarlatM	8/13/98	1010
TPH (DRO)	<200	mg/L	200	0.5	CarlsenS	8/4/98	8015 M

SAMPLE RESULTS

CLIENT SAMPLE ID: D-3 Middle Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052820
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
POLYCHLORINATED BIPHENYLS							
PCB (AR1016)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1221)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1232)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1242)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1248)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1254)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1260)	nd	µg/L	2.5	1	DavisW	8/5/98	8082

SAMPLE RESULTS

CLIENT SAMPLE ID: D-3 Middle Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052820
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
VOLATILE ORGANICS							
Acetone	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
Acrolein	nd R	µg/L	1000	20	WilliamsJ	8/6/98	8260 B
Acrylonitrile	nd	µg/L	1000	20	WilliamsJ	8/6/98	8260 B
Benzene	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Bromobenzene	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Bromochloromethane	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Bromodichloromethane	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Bromoform	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Bromomethane	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Butylbenzene (normal)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Butylbenzene (sec)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Butylbenzene (tert)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Carbon disulfide	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Carbon Tetrachloride	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Chlorobenzene	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Chloroethane	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Chloroethyl vinyl ether (2)	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
Chloroform	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Chlorohexane (1)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Chloromethane	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
Chlorotoluene (2)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Chlorotoluene (4)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Cyclohexanone	85300 J	µg/L	5000	100	WilliamsJ	8/6/98	8260 B
Dibromo-3-chloropropane (1,2)	nd	µg/L	1500	30	WilliamsJ	8/6/98	8260 B
Dibromochloromethane	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Dibromoethane (1,2)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Dibromomethane	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Dichloro-2-butene (1,4)	nd	µg/L	1500	30	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,2)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,3)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Dichlorobenzene (1,4)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Dichlorodifluoromethane	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Dichloroethane (1,1)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Dichloroethane (1,2)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Dichloroethene (1,1)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Dichloroethene (c-1,2)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Dichloroethene (t-1,2)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Dichlorofluoromethane	nd	µg/L	250	5	WilliamsJ	8/6/98	8260 B
Dichloropropane (1,2)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Dichloropropane (1,3)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: D-3 Middle Drum NE Corner
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052820
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Dichloropropane (2,2)	nd	µg/L	250	5	WilliamsJ	8/6/98	8260 B
Dichloropropene (1,1)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Dichloropropene (c-1,3)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Dichloropropene (t-1,3)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Diethyl ether	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
Ethyl methacrylate	nd	µg/L	250	5	WilliamsJ	8/6/98	8260 B
Ethylbenzene	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Heptane (normal)	nd	µg/L	250	5	WilliamsJ	8/6/98	8260 B
Hexachlorobutadiene	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Hexanone (2-)	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
Iodomethane	nd	µg/L	250	5	WilliamsJ	8/6/98	8260 B
Isopropylbenzene	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Isopropyltoluene (para)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Methyl Ethyl Ketone (MEK)	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
ethyl Isobutyl Ketone (MIBK)	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
Methyl methacrylate	nd	µg/L	250	5	WilliamsJ	8/6/98	8260 B
thylbutylether (tert) (MTBE)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Methylene chloride	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Naphthalene	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Propylbenzene (normal)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Styrene	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Tetrachloroethane (1,1,1,2)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Tetrachloroethane (1,1,2,2)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Tetrachloroethene	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Tetrahydrofuran	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
Toluene	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
TPH	19500	µg/L	10000	200	WilliamsJ	8/6/98	8260 B
Trichlorobenzene (1,2,3)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Trichlorobenzene (1,2,4)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Trichloroethane (1,1,1)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Trichloroethane (1,1,2)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Trichloroethene	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Trichlorofluoromethane	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Trichloropropane (1,2,3)	nd	µg/L	250	5	WilliamsJ	8/6/98	8260 B
Trichlorotrifluoroethane	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
methylbenzene (1,2,4)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
imethylbenzene (1,3,5)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
yl acetate	nd	µg/L	500	10	WilliamsJ	8/6/98	8260 B
Vinyl Chloride	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B
Xylene (ortho)	nd	µg/L	50	1	WilliamsJ	8/6/98	8260 B
Xylenes (meta + para)	nd	µg/L	100	2	WilliamsJ	8/6/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: Sewer-1 NW Sewer Catch Basin
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052821
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Ignitability (Closed Cup)	>201	Fahrenheit			SzkarlatM	8/13/98	1010
TPH (DRO)	<1	mg/L	1	0.5	CarlsenS	8/4/98	8015 M

SAMPLE RESULTS

CLIENT SAMPLE ID: Sewer-1 NW Sewer Catch Basin
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052821
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
POLYCHLORINATED BIPHENYLS							
PCB (AR1016)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1221)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1232)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1242)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1248)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1254)	nd	µg/L	2.5	1	DavisW	8/5/98	8082
PCB (AR1260)	nd	µg/L	2.5	1	DavisW	8/5/98	8082

SAMPLE RESULTS

CLIENT SAMPLE ID: Sewer-1 NW Sewer Catch Basin
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052821
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
VOLATILE ORGANICS							
Acetone	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
Acrolein	nd R	µg/L	200	20	WilliamsJ	8/5/98	8260 B
Acrylonitrile	nd	µg/L	200	20	WilliamsJ	8/5/98	8260 B
Benzene	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Bromobenzene	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Bromochloromethane	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Bromodichloromethane	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Bromoform	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Bromomethane	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Butylbenzene (normal)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Butylbenzene (sec)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Butylbenzene (tert)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Carbon disulfide	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Carbon Tetrachloride	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Chlorobenzene	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Chloroethane	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Chloroethyl vinyl ether (2)	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
Chloroform	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Chlorohexane (1)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Chloromethane	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
Chlorotoluene (2)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Chlorotoluene (4)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Cyclohexanone	nd R	µg/L	1000	100	WilliamsJ	8/5/98	8260 B
Dibromo-3-chloropropane (1,2)	nd	µg/L	300	30	WilliamsJ	8/5/98	8260 B
Dibromochloromethane	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Dibromoethane (1,2)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Dibromomethane	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Dichloro-2-butene (1,4)	nd	µg/L	300	30	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,2)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,3)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,4)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Dichlorodifluoromethane	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Dichloroethane (1,1)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Dichloroethane (1,2)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Dichloroethene (1,1)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Dichloroethene (c-1,2)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Dichloroethene (t-1,2)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Dichlorofluoromethane	nd	µg/L	50	5	WilliamsJ	8/5/98	8260 B
Dichloropropane (1,2)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Dichloropropane (1,3)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: Sewer-1 NW Sewer Catch Basin
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052821
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Dichloropropane (2,2)	nd	µg/L	50	5	WilliamsJ	8/5/98	8260 B
Dichloropropene (1,1)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Dichloropropene (c-1,3)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Dichloropropene (t-1,3)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Diethyl ether	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
Ethyl methacrylate	nd	µg/L	50	5	WilliamsJ	8/5/98	8260 B
Ethylbenzene	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Heptane (normal)	nd	µg/L	50	5	WilliamsJ	8/5/98	8260 B
Hexachlorobutadiene	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Hexanone (2-)	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
Iodomethane	nd	µg/L	50	5	WilliamsJ	8/5/98	8260 B
Isopropylbenzene	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Isopropyltoluene (para)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Methyl Ethyl Ketone (MEK)	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
ıthyl Isobutyl Ketone (MIBK)	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
Methyl methacrylate	nd	µg/L	50	5	WilliamsJ	8/5/98	8260 B
ıthylbutylether (tert) (MTBE)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Methylene chloride	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Naphthalene	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Propylbenzene (normal)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Styrene	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Tetrachloroethane (1,1,1,2)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Tetrachloroethane (1,1,2,2)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Tetrachloroethene	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Tetrahydrofuran	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
Toluene	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
TPH	3280	µg/L	2000	200	WilliamsJ	8/5/98	8260 B
Trichlorobenzene (1,2,3)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Trichlorobenzene (1,2,4)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Trichloroethane (1,1,1)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Trichloroethane (1,1,2)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Trichloroethene	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Trichlorofluoromethane	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Trichloropropane (1,2,3)	nd	µg/L	50	5	WilliamsJ	8/5/98	8260 B
Trichlorotrifluoroethane	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
ımethylbenzene (1,2,4)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
.rimethylbenzene (1,3,5)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
ıyl acetate	nd	µg/L	100	10	WilliamsJ	8/5/98	8260 B
vinyl Chloride	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B
Xylene (ortho)	nd	µg/L	10	1	WilliamsJ	8/5/98	8260 B
Xylenes (meta + para)	nd	µg/L	20	2	WilliamsJ	8/5/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: Spill-1 NW Ground Outside
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052822
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Ignitability (Closed Cup)	148	Fahrenheit			SzkarlatM	8/13/98	1010
TPH (DRO)	227000	mg/kg(wet)	82000	20	CarlsenS	8/5/98	8015 M

SAMPLE RESULTS

CLIENT SAMPLE ID: Spill-1 NW Ground Outside
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052822
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
POLYCHLORINATED BIPHENYLS							
PCB (AR1016)	nd	mg/kg(wet)	2.5	0.33	DavisW	8/5/98	8082
PCB (AR1221)	nd	mg/kg(wet)	2.5	0.33	DavisW	8/5/98	8082
PCB (AR1232)	nd	mg/kg(wet)	2.5	0.33	DavisW	8/5/98	8082
PCB (AR1242)	nd	mg/kg(wet)	2.5	0.33	DavisW	8/5/98	8082
PCB (AR1248)	nd	mg/kg(wet)	2.5	0.33	DavisW	8/5/98	8082
PCB (AR1254)	nd	mg/kg(wet)	2.5	0.33	DavisW	8/5/98	8082
PCB (AR1260)	nd	mg/kg(wet)	2.5	0.33	DavisW	8/5/98	8082

SAMPLE RESULTS

CLIENT SAMPLE ID: Spill-1 NW Ground Outside
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052822
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
VOLATILE ORGANICS							
Acetone	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
Acrolein	nd R	mg/kg(wet)	40	1	WilliamsJ	8/5/98	8260 B
Acrylonitrile	nd	mg/kg(wet)	40	1	WilliamsJ	8/5/98	8260 B
Benzene	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Bromobenzene	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Bromochloromethane	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Bromodichloromethane	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Bromoform	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Bromomethane	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Butylbenzene (normal)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Butylbenzene (sec)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Butylbenzene (tert)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Carbon disulfide	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Carbon Tetrachloride	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Chlorobenzene	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Chloroethane	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Chloroethyl vinyl ether (2)	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
Chloroform	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Chlorohexane (1)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Chloromethane	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
Chlorotoluene (2)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Chlorotoluene (4)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Cyclohexanone	nd R	mg/kg(wet)	200	5	WilliamsJ	8/5/98	8260 B
Dibromo-3-chloropropane (1,2)	nd	mg/kg(wet)	60	1.5	WilliamsJ	8/5/98	8260 B
Dibromochloromethane	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Dibromoethane (1,2)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Dibromomethane	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichloro-2-butene (1,4)	nd	mg/kg(wet)	60	1.5	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,2)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,3)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichlorobenzene (1,4)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichlorodifluoromethane	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichloroethane (1,1)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Dichloroethane (1,2)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Dichloroethene (1,1)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichloroethene (c-1,2)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Dichloroethene (t-1,2)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Dichlorofluoromethane	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichloropropane (1,2)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Dichloropropane (1,3)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B

SAMPLE RESULTS

CLIENT SAMPLE ID: Spill-1 NW Ground Outside
CLIENT PROJECT: SO5-9807-013
Date Collected: 7/24/98
Date Received: 7/29/98

Report Date: 8/18/98
EIS Sample No: 052822
EIS Order No: 980700304

Parameter	Results	Units	SDL	MDL	Analyst	Test Date	Method
Dichloropropane (2,2)	nd	mg/kg(wet)	10	0.25	WilliamsJ	8/5/98	8260 B
Dichloropropene (1,1)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichloropropene (c-1,3)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Dichloropropene (t-1,3)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Diethyl ether	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
Ethyl methacrylate	nd	mg/kg(wet)	10	0.25	WilliamsJ	8/5/98	8260 B
Ethylbenzene	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Heptane (normal)	nd	mg/kg(wet)	10	0.25	WilliamsJ	8/5/98	8260 B
Hexachlorobutadiene	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Hexanone (2-)	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
Iodomethane	nd	mg/kg(wet)	10	0.25	WilliamsJ	8/5/98	8260 B
Isopropylbenzene	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Isopropyltoluene (para)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Methyl Ethyl Ketone (MEK)	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
ethyl Isobutyl Ketone (MIBK)	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
Methyl methacrylate	nd	mg/kg(wet)	10	0.25	WilliamsJ	8/5/98	8260 B
ethylbutylether (tert) (MTBE)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Methylene chloride	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Naphthalene	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Propylbenzene (normal)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Styrene	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Tetrachloroethane (1,1,1,2)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Tetrachloroethane (1,1,2,2)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Tetrachloroethene	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Tetrahydrofuran	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
Toluene	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
TPH	850	mg/kg(wet)	400	10	WilliamsJ	8/5/98	8260 B
Trichlorobenzene (1,2,3)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Trichloroethane (1,1,1)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Trichloroethane (1,1,2)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Trichloroethene	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Trichlorofluoromethane	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Trichloropropane (1,2,3)	nd	mg/kg(wet)	10	0.25	WilliamsJ	8/5/98	8260 B
Trichlorotrifluoroethane	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
methylbenzene (1,2,4)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
imethylbenzene (1,3,5)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
nyl acetate	nd	mg/kg(wet)	20	0.5	WilliamsJ	8/5/98	8260 B
Vinyl Chloride	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B
Xylene (ortho)	nd	mg/kg(wet)	2	0.05	WilliamsJ	8/5/98	8260 B
Xylenes (meta + para)	nd	mg/kg(wet)	4	0.1	WilliamsJ	8/5/98	8260 B

ecology and environment, inc.
International Specialists in the Environment

33 North Dearborn Street
Chicago, Illinois 60602
Tel. 312/578-9243, Fax: 312/578-9345

M E M O R A N D U M

DATE: October 23, 1998

TO: Joseph Klemp, START Project Manager, E & E, Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager, E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for Volatile Organic Compounds (VOCs), Danley Machines, Cicero, Cook County, Illinois

REFERENCE: Project TDD S05-9807-013 Analytical TDD S05-9808-806
Project PAN 8U1301SIXX Analytical PAN 8GAF01TAXX

The data quality assurance (QA) review of two drum samples collected from the Danley Machines site is complete. The samples were collected on August 11, 1998, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to Clayton Laboratory Services, Novi, Michigan. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8260.

Sample Identification

START Identification No.	Laboratory Identification No.
31	65498-01
34	65498-02

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on August 11, 1998, and analyzed on August 19, 1998. This is within the 14-day holding time limit.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning: Acceptable

GC/MS tuning to meet ion abundance criteria using bromofluorobenzene (BFB) were acceptable and samples were analyzed within 12 hours of BFB tuning.

III. Calibrations:

• Initial Calibration: Qualified

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all detected target compounds, except methylene chloride. The value for this compound in sample 34 has been qualified as estimated.

• Continuing Calibration: Not Applicable

Initial calibrations were used for quantitation for both samples.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention times of the internal standards were within the 30-second control limit.

VI. Compound Identification: Acceptable

The mass spectra and retention times of the detected compounds matched those of the standards.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples and blank were within laboratory-established guidelines.

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 5.0, VOAs by GC/MS analysis. Based upon the information provided, the data are acceptable for use, with the above-stated qualifications.

Data Qualifiers and Definitions:

J - The associated numerical value is an estimated quantity because the reported concentrations were less than required detection limits or quality control criteria were not met.

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33 North Dearborn Street
Chicago, Illinois 60602
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M E M O R A N D U M

DATE: October 23, 1998

TO: Joseph Klemp, START Project Manager, E & E, Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager, E & E, Chicago, Illinois

SUBJECT: Organic Data Quality Review for Semivolatile Organic Compounds (SVOCs), and Polynuclear Aromatics (PNAs), Danley Machines, Cicero, Cook County, Illinois

REFERENCE: Project TDD S05-9807-013 Analytical TDD S05-9808-806
Project PAN 8U1301SIXX Analytical PAN 8GAF01TAXX

The data quality assurance (QA) review of three drum samples collected from the Danley Machines site is complete. The samples were collected on August 11, 1998, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to Clayton Laboratory Services, Novi, Michigan. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Method 8270.

Sample Identification

START Identification No.	Laboratory Identification No.
31	65498-01
34	65498-02
40	65498-03

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on August 11, 1998, extracted on August 17, 1998, and analyzed on August 20, 1998, for SVOCs. Sample number 40 was extacted on August 14, 1998, and analyzed on August 21, 1998, for PNAs. This is within the 14-day holding time limit, from collection to extraction, and 40-day limit from extraction to analysis.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning: Acceptable

GC/MS tuning to meet ion abundance criteria using decafluorotriphenylphosphine (DFTPP) were acceptable and samples were analyzed within 12 hours of DFTPP tuning.

III. Calibrations:

• Initial Calibration: Acceptable

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05. The percent relative standard deviations (%RSDs) between response factors were less than 30% for all detected target compounds.

• Continuing Calibration: Acceptable

The percent differences of the response factors were less than 25%, as required for detected target compounds.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention times of the internal standards were within the 30-second control limit.

VI. Compound Identification: Non Applicable

There were no target compounds detected in the samples.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the samples and blank were within laboratory-established guidelines.

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 4.0 BNAs by GC/MS analysis. Based upon the information provided, the data are acceptable for use.

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M E M O R A N D U M

DATE: October 23, 1998

TO: Joseph Klemp, START Project Manager, E & E, Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager, E & E, Chicago, Illinois

SUBJECT: Inorganic Data Quality Review for Resource Conservation and Recovery Act (RCRA) Metals, Danley Machines, Cicero, Cook County, Illinois

REFERENCE: Project TDD S05-9807-013 Analytical TDD S05-9808-806
Project PAN 8U1301SIXX Analytical PAN 8GAF01TAXX

The data quality assurance (QA) review of three drum samples collected from the Danley Machines site is complete. The samples were collected on August 11, 1998, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to Clayton Laboratory Services, Novi, Michigan. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 6010 and 7470.

Sample Identification

START Identification No.	Laboratory Identification No.
31	65498-001
34	65498-002
40	65498-003

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on August 11, 1998, and analyzed between August 19 and 21, 1998. Analysis for mercury was performed on August 17, 1998. This is within the 6-month (28 days for mercury) holding time limit.

II. Calibration:

- Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90 to 110% (80 to 120% for mercury), as required. The correlation coefficient for mercury exceeded 0.995.

- Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90 to 110% (80 to 120% for mercury), as required.

III. Blanks: Acceptable

Calibration and preparation blanks were analyzed with each analytical batch. No target analytes were detected in the blanks.

IV. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.

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M E M O R A N D U M

DATE: October 23, 1998

TO: Joseph Klemp, START Project Manager, E & E, Chicago, Illinois

FROM: David Hendren, START Analytical Services Manager, E & E, Chicago, Illinois

THROUGH: Mary Jane Ripp, START Assistant Program Manager, E & E, Chicago, Illinois

SUBJECT: Data Quality Review for Flash Point and pH, Danley Machines, Cicero, Cook County, Illinois

REFERENCE: Project TDD S05-9807-013 Analytical TDD S05-9808-806
Project PAN 8U1301SIXX Analytical PAN 8GAF01TAXX

The data quality assurance (QA) review of three drum waste samples collected from the Danley Machines site is complete. The samples were collected on August 11, 1998, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to Clayton Laboratory Services, Novi, Michigan. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste 846 Methods 1010 and 9045.

Sample Identification

START Identification No.	Laboratory Identification No.
31	65498-001
34	65498-002
40	65498-003

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on August 11, 1998, and analyzed on August 17, 1998, for pH, and on August 20, 1998, for flash point. The Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990) does not specify holding times for these parameters.

II. Calibrations: Acceptable

The calibrations for flash point and pH were verified before sample analyses. The calibration for flash point was verified using xylene and the calibration for pH was verified following analyses of three standard solutions.

III. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in OSWER Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.

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Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference#: 505-9807-013

Sample Identification:	31	Date Sampled:	08/11/98
Lab Number:	001a	Date Received:	08/14/98
Sample Type:	Liquid (Non-Aqueous)		
Analyst:	DH		

Analyte	Concentration (mg/L)	LOD (mg/L)	Preparation Method and Date		Analytical Method and Date	
Metals						
Arsenic	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Barium	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Cadmium	<0.5	0.5	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Chromium	2	1	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Lead	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Mercury	<0.01	0.01	EPA 7470	08/17/98	EPA 7470A	08/17/98
Selenium	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/20/98
Silver	<0.2	0.2	EPA 3010A	08/19/98	EPA 6010A	08/19/98

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Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference#: 505-9807-013

Sample Identification:	34	Date Sampled:	08/11/98
Lab Number:	002a	Date Received:	08/14/98
Sample Type:	Liquid (Non-Aqueous)		
Analyst:	CW		

Analyte	Concentration (mg/L)	LOD (mg/L)	Preparation Method and Date		Analytical Method and Date	
Metals						
Arsenic	<2	2	EPA 3010A	08/20/98	EPA 6010A	08/20/98
Barium	8	2	EPA 3010A	08/20/98	EPA 6010A	08/20/98
Cadmium	<1	1	EPA 3010A	08/20/98	EPA 6010A	08/20/98
Chromium	<2	2	EPA 3010A	08/20/98	EPA 6010A	08/20/98
Lead	<2	2	EPA 3010A	08/20/98	EPA 6010A	08/20/98
Mercury	<0.01	0.01	EPA 7470	08/17/98	EPA 7470A	08/17/98
Selenium	<2	2	EPA 3010A	08/20/98	EPA 6010A	08/21/98
Silver	<0.4	0.4	EPA 3010A	08/20/98	EPA 6010A	08/20/98

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Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference#: 505-9807-013

Sample Identification:	40	Date Sampled:	08/11/98
Lab Number:	003a	Date Received:	08/14/98
Sample Type:	Liquid (Non-Aqueous)		
Analyst:	DH		

Analyte	Concentration (mg/L)	LOD (mg/L)	Preparation Method and Date		Analytical Method and Date	
Metals						
Arsenic	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Barium	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Cadmium	<0.5	0.5	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Chromium	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Lead	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/19/98
Mercury	<0.01	0.01	EPA 7470	08/17/98	EPA 7470A	08/17/98
Selenium	<1	1	EPA 3010A	08/19/98	EPA 6010A	08/20/98
Silver	<0.2	0.2	EPA 3010A	08/19/98	EPA 6010A	08/19/98

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Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00

Sample Identification: 31
Lab Number: 001
Sample Type: Liquid
Date Sampled: 08/11/98
Date Received: 08/14/98

Analyte	Analytical Results	Analytical Method	Date Analyzed	Analyst
Flashpoint	>200° F	EPA 1010	08/20/98	RH
pH	5.6	EPA 9040	08/17/98	SC

Sample Identification: 34
Lab Number: 002
Sample Type: Liquid
Date Sampled: 08/11/98
Date Received: 08/14/98

Analyte	Analytical Results	Analytical Method	Date Analyzed	Analyst
Flashpoint	>200° F	EPA 1010	08/20/98	RH
pH	7.3	EPA 9040	08/17/98	SC

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Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00

Sample Identification:	40	Date Sampled:	08/11/98
Lab Number:	003	Date Received:	08/14/98
Sample Type:	Liquid		

Analyte	Analytical Results	Analytical Method	Date Analyzed	Analyst
Flashpoint	>200° F	EPA 1010	08/20/98	RH
pH	7.6	EPA 9040	08/17/98	SC

General Notes:
<: Less than the indicated limit of detection (LOD)
--: Information not available or not applicable

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Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	31	Date Sampled:	08/11/98
Lab Number:	001a/B1615.D,B1617.D	Date Received:	08/14/98
Sample Type:	Liquid	Date Prepared:	08/19/98
Preparation Method:	--	Date Analyzed:	08/19/98
Analytical Method:	EPA 8260		
Analyst:	TF		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	580,000 (b)	80,000
Benzene	<4,000	4,000
Bromodichloromethane	<800	800
Bromoform	<800	800
Bromomethane	<800	800
2-Butanone	<40,000	40,000
Carbon disulfide	<40,000	40,000
Carbon tetrachloride	<800	800
Chlorobenzene	<800	800
Chloroethane	<800	800
Chloroform	<800	800
Chloromethane	<800	800
Dibromochloromethane	<800	800
1,2-Dichlorobenzene	<800	800
1,3-Dichlorobenzene	<800	800
1,4-Dichlorobenzene	<800	800
1,1-Dichloroethane	<800	800
1,2-Dichloroethane	<800	800
1,1-Dichloroethene	<800	800
cis-1,2-Dichloroethene	<800	800
trans-1,2-Dichloroethene	<800	800
1,2-Dichloropropane	<800	800
cis-1,3-Dichloropropene	<800	800
trans-1,3-Dichloropropene	<800	800
Ethylbenzene	<800	800
2-Hexanone	<40,000	40,000
Methylene chloride	190,000,000	4,000
4-Methyl-2-pentanone	<40,000	40,000
Styrene	<800	800
1,1,2,2-Tetrachloroethane	<800	800
Tetrachloroethene	<800	800
Toluene	<800	800

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Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	31	Date Sampled:	08/11/98
Lab Number:	001a/B1615.D,B1617.D	Date Received:	08/14/98
Sample Type:	Liquid	Date Prepared:	08/19/98
Preparation Method:	--	Date Analyzed:	08/19/98
Analytical Method:	EPA 8260		
Analyst:	TF		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
1,1,1-Trichloroethane	<800	800
1,1,2-Trichloroethane	<800	800
Trichloroethene	<800	800
Vinyl acetate	<800	800
Vinyl chloride	<800	800
Xylenes [total]	<3,000	3,000

(a): Lower LOD'S could not be achieved due to the high concentration of one or more of the target list compounds.
(b): Result is estimated, it exceeds the instrument linearity.

General Notes:
<: Less than the indicated limit of detection (LOD)
--: Information not available or not applicable

Clayton LABORATORY SERVICES

Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	31	Date Sampled:	08/11/98
Lab Number:	001a/E0041.D	Date Received:	08/14/98
Sample Type:	Liquid	Date Prepared:	08/17/98
Preparation Method:	EPA 3510B	Date Analyzed:	08/20/98
Analytical Method:	EPA 8270		
Analyst:	TF		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Base Neutral Compounds		
Acenaphthene	<800	800
Acenaphthylene	<800	800
Anthracene	<800	800
Benzo[a]anthracene	<800	800
Benzo[a]pyrene	<800	800
Benzo[b]fluoranthene	<800	800
Benzo[g,h,i]perylene	<800	800
Benzo[k]fluoranthene	<800	800
bis(2-chloroethoxy)methane	<800 (b)	800
bis(2-chloroethyl)ether	<800	800
bis(2-chloroisopropyl)ether	<800	800
bis(2-ethylhexyl)phthalate	<800	800
4-Bromophenyl-phenylether	<800	800
Butylbenzylphthalate	<800	800
4-Chloroaniline	<3,000 (b)	3,000
2-Chloronaphthalene	<800	800
4-Chlorophenyl-phenylether	<800	800
Chrysene	<800	800
Di-n-butylphthalate	<800	800
Di-n-octylphthalate	<800	800
Dibenzo[a,h]anthracene	<800	800
Dibenzofuran	<800	800
3,3'-Dichlorobenzidine	<3,000	3,000
Diethylphthalate	<800	800
Dimethylphthalate	<800	800
2,4-Dinitrotoluene	<800	800
2,6-Dinitrotoluene	<800	800
Fluoranthene	<800	800
Fluorene	<800	800
Hexachlorobenzene	<800	800
Hexachlorobutadiene	<800	800
Hexachlorocyclopentadiene	<800 (b)	800
Hexachloroethane	<800	800
Indeno[1,2,3-cd]pyrene	<800	800
Isophorone	<800 (b)	800
2-Methylnaphthalene	<800 (b)	800
N-Nitroso-di-n-propylamine	<800	800
N-Nitrosodimethylamine	<800	800

Clayton LABORATORY SERVICES

Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	31	Date Sampled:	08/11/98
Lab Number:	001a/E0041.D	Date Received:	08/14/98
Sample Type:	Liquid	Date Prepared:	08/17/98
Preparation Method:	EPA 3510B	Date Analyzed:	08/20/98
Analytical Method:	EPA 8270		
Analyst:	TF		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Base Neutral Compounds (continued)		
N-Nitrosodiphenylamine	<800	800
Naphthalene	<800 (b)	800
2-Nitroaniline	<3,000	3,000
3-Nitroaniline	<3,000	3,000
4-Nitroaniline	<3,000	3,000
Nitrobenzene	<800 (b)	800
Phenanthrene	<800	800
Pyrene	<800	800
1,2,4-Trichlorobenzene	<800 (b)	800
Acid Compounds		
Benzoic Acid	<8,000 (b)	8,000
4-Chloro-3-methylphenol	<800 (b)	800
2-Chlorophenol	<800	800
2,4-Dichlorophenol	<800 (b)	800
2,4-Dimethylphenol	<800 (b)	800
4,6-Dinitro-2-methylphenol	<3,000	3,000
2,4-Dinitrophenol	<3,000	3,000
2-Methylphenol	<800	800
4-Methylphenol	<800	800
2-Nitrophenol	<800 (b)	800
4-Nitrophenol	<3,000	3,000
Pentachlorophenol	<3,000	3,000
Phenol	<800	800
2,4,5-Trichlorophenol	<8,000	8,000
2,4,6-Trichlorophenol	<800	800

(a): Lower LOD'S could not be achieved due to matrix interference.
(b): Please note that the internal standard was outside of acceptance criteria. This does not affect the value reported.

General Notes:
<: Less than the indicated limit of detection (LOD)
--: Information not available or not applicable

Clayton LABORATORY SERVICES

Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	34	Date Sampled:	08/11/98
Lab Number:	002a/E0042.D	Date Received:	08/14/98
Sample Type:	Liquid	Date Prepared:	08/17/98
Preparation Method:	EPA 3510B	Date Analyzed:	08/20/98
Analytical Method:	EPA 8270		
Analyst:	TF		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Base Neutral Compounds		
Acenaphthene	<1,000	1,000
Acenaphthylene	<1,000	1,000
Anthracene	<1,000	1,000
Benzo[a]anthracene	<1,000	1,000
Benzo[a]pyrene	<1,000	1,000
Benzo[b]fluoranthene	<1,000	1,000
Benzo[g,h,i]perylene	<1,000	1,000
Benzo[k]fluoranthene	<1,000	1,000
bis(2-chloroethoxy)methane	<1,000	1,000
bis(2-chloroethyl)ether	<1,000	1,000
bis(2-chloroisopropyl)ether	<1,000	1,000
bis(2-ethylhexyl)phthalate	<1,000	1,000
4-Bromophenyl-phenylether	<1,000	1,000
Butylbenzylphthalate	<1,000	1,000
4-Chloroaniline	<4,000	4,000
2-Chloronaphthalene	<1,000	1,000
4-Chlorophenyl-phenylether	<1,000	1,000
Chrysene	<1,000	1,000
Di-n-butylphthalate	<1,000	1,000
Di-n-octylphthalate	<1,000	1,000
Dibenzo[a,h]anthracene	<1,000	1,000
Dibenzofuran	<1,000	1,000
3,3'-Dichlorobenzidine	<4,000	4,000
Diethylphthalate	<1,000	1,000
Dimethylphthalate	<1,000	1,000
2,4-Dinitrotoluene	<1,000	1,000
2,6-Dinitrotoluene	<1,000	1,000
Fluoranthene	<1,000	1,000
Fluorene	<1,000	1,000
Hexachlorobenzene	<1,000	1,000
Hexachlorobutadiene	<1,000	1,000
Hexachlorocyclopentadiene	<1,000	1,000
Hexachloroethane	<1,000	1,000
Indeno[1,2,3-cd]pyrene	<1,000	1,000
Isophorone	<1,000	1,000
2-Methylnaphthalene	<1,000	1,000
N-Nitroso-di-n-propylamine	<1,000	1,000
N-Nitrosodimethylamine	<1,000	1,000

Clayton LABORATORY SERVICES

Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	34	Date Sampled:	08/11/98
Lab Number:	002a/E0042.D	Date Received:	08/14/98
Sample Type:	Liquid	Date Prepared:	08/17/98
Preparation Method:	EPA 3510B	Date Analyzed:	08/20/98
Analytical Method:	EPA 8270		
Analyst:	TF		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Base Neutral Compounds (continued)		
N-Nitrosodiphenylamine	<1,000	1,000
Naphthalene	<1,000	1,000
2-Nitroaniline	<4,000	4,000
3-Nitroaniline	<4,000	4,000
4-Nitroaniline	<4,000	4,000
Nitrobenzene	<1,000	1,000
Phenanthrene	<1,000	1,000
Pyrene	<1,000	1,000
1,2,4-Trichlorobenzene	<1,000	1,000
Acid Compounds		
Benzoic Acid	<10,000	10,000
4-Chloro-3-methylphenol	<1,000	1,000
2-Chlorophenol	<1,000	1,000
2,4-Dichlorophenol	<1,000	1,000
2,4-Dimethylphenol	<1,000	1,000
4,6-Dinitro-2-methylphenol	<4,000	4,000
2,4-Dinitrophenol	<4,000	4,000
2-Methylphenol	<1,000	1,000
4-Methylphenol	<1,000	1,000
2-Nitrophenol	<1,000	1,000
4-Nitrophenol	<4,000	4,000
Pentachlorophenol	<4,000	4,000
Phenol	<1,000	1,000
2,4,5-Trichlorophenol	<10,000	10,000
2,4,6-Trichlorophenol	<1,000	1,000

(a): Lower LOD'S could not be achieved due to matrix interference

General Notes:

<: Less than the indicated limit of detection (LOD)

--: Information not available or not applicable

Clayton LABORATORY SERVICES

Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	34	Date Sampled:	08/11/98
Lab Number:	002a/B1682.D	Date Received:	08/14/98
Sample Type:	Liquid	Date Prepared:	08/22/98
Preparation Method:	--	Date Analyzed:	08/22/98
Analytical Method:	EPA 8260		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<10,000	10,000
Benzene	<700	700
Bromodichloromethane	<100	100
Bromoform	<100	100
Bromomethane	<100	100
2-Butanone	<7,000	7,000
Carbon disulfide	<7,000	7,000
Carbon tetrachloride	<100	100
Chlorobenzene	<100	100
Chloroethane	<100	100
Chloroform	<100	100
Chloromethane	<100	100
Dibromochloromethane	<100	100
1,2-Dichlorobenzene	<100	100
1,3-Dichlorobenzene	<100	100
1,4-Dichlorobenzene	<100	100
1,1-Dichloroethane	<100	100
1,2-Dichloroethane	<100	100
1,1-Dichloroethene	<100	100
cis-1,2-Dichloroethene	<100	100
trans-1,2-Dichloroethene	<100	100
1,2-Dichloropropane	<100	100
cis-1,3-Dichloropropene	<100	100
trans-1,3-Dichloropropene	<100	100
Ethylbenzene	100	100
2-Hexanone	<7,000	7,000
Methylene chloride	38,000	700
4-Methyl-2-pentanone	<7,000	7,000
Styrene	<100	100
1,1,2,2-Tetrachloroethane	<100	100
Tetrachloroethene	<100	100
Toluene	400	100

Clayton LABORATORY SERVICES

Analytical Results
for
ECOLOGY & ENVIRONMENT, INC.
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	34	Date Sampled:	08/11/98
Lab Number:	002a/B1682.D	Date Received:	08/14/98
Sample Type:	Liquid	Date Prepared:	08/22/98
Preparation Method:	--	Date Analyzed:	08/22/98
Analytical Method:	EPA 8260		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
1,1,1-Trichloroethane	<100	100
1,1,2-Trichloroethane	<100	100
Trichloroethene	<100	100
Vinyl acetate	<100	100
Vinyl chloride	<100	100
Xylenes [total]	1,000	400

(a): Lower LOD'S could not be achieved due to the high concentration of one or more of the target list compounds.

General Notes:

<: Less than the indicated limit of detection (LOD)

--: Information not available or not applicable

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Analytical Results
for
ECOLOGY & ENVIRONMENT
Clayton Project No. 65498.00
Client Reference: 505-9807-013

Sample Identification:	40	Date Sampled:	08/11/98
Lab Number:	003a/E0057.D	Date Received:	08/14/98
Sample Type:	Water	Date Prepared:	08/20/98
Preparation Method:	EPA 3510B	Date Analyzed:	08/21/98
Analytical Method:	EPA 8270		
Analyst:	TF		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Polynuclear Aromatics		
Acenaphthene	<800	800
Acenaphthylene	<800	800
Anthracene	<800	800
Benzo[a]anthracene	<800	800
Benzo[a]pyrene	<800	800
Benzo[b]fluoranthene	<800	800
Benzo[g,h,i]perylene	<800	800
Benzo[k]fluoranthene	<800	800
Chrysene	<800	800
Dibenzo[a,h]anthracene	<800	800
Fluoranthene	<800	800
Fluorene	<800	800
Indeno[1,2,3-cd]pyrene	<800	800
Naphthalene	<800	800
Phenanthrene	<800	800
Pyrene	<800	800

(a): MDEQ LOD'S could not be achieved due to matrix interference.

General Notes:

<: Less than the indicated limit of detection (LOD)

--: Information not available or not applicable